This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

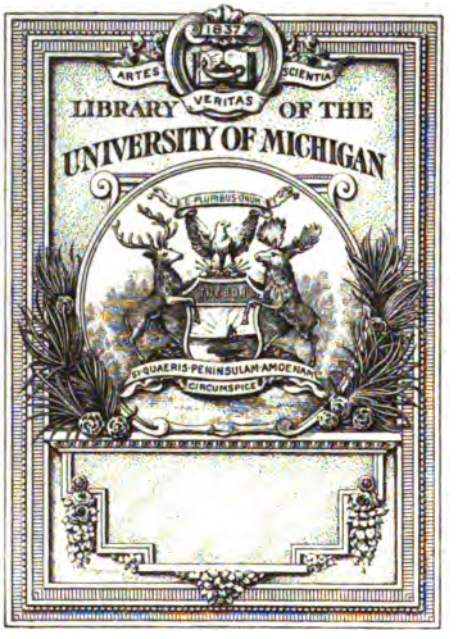
+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

B 3 9015 00216 132 4
University of Michigan – BUHR


ARTES
VERITAS
SCIENTIA
LIBRARY OF THE
UNIVERSITY OF MICHIGAN
SI QUAERIS PENINSULAM AMOENAM
CIRCUMSPICE

THE MEDICAL RECORD

A Semi-Monthly Journal of Medicine and Surgery.

EDITED BY

GEORGE F. SHRADY, A.M., M.D.

Volume 9.

JANUARY 1, 1874—DECEMBER 15, 1874.

NEW YORK:
WILLIAM WOOD & COMPANY,
27 GREAT JONES STREET.

B

JOHN F. TROW & SON,
PRINTERS AND BOOKBINDERS,
205-213 *East 12th St.*
NEW YORK.

CONTRIBUTORS TO VOLUME IX.

A.

ADAMS, Dr. J. Q., Carmel, N. Y.
ALLEN, Dr. NATHAN, Lowell, Mass.

B.

BARKER, Prof. FORDYCE, M.D., New York.
BEARD, Dr. GEO. M., New York.
BENNETT, Dr. W. H., New York.
BIGELOW, Dr. H. R., Hartford, Conn.
BILLINGS, Dr. J. S., Ass't Surgeon U. S. Army.
BIZZELL, Dr. W. D., Gainesville, Alabama.
BLACK, Dr. J. R., Newark, Ohio.
BOWEN, Dr. W. SHAW, Hartford, Conn.
BOZEMAN, Dr. NATHAN, New York.
BRIDDON, Dr. C. K., New York.
BRONSON, Dr. E. B., New York.
BUCK, Dr. A. H., New York.
BUCK, Dr. GURDON, New York.
BULL, Dr. C. S., New York.
BUMSTEAD, Prof. FREEMAN J., New York.
BURNETT, Dr. S. M., Knoxville, Tenn.

C.

CAMPBELL, Dr. W. N., New York.
CARO, Dr. SALVATORE, New York.
CARPENTER, Dr. WESLEY M., New York.
CASTLE, Dr. FREDERIC A., New York.
CHANDLER, Dr. CHAS. F., New York.
CLARK, Prof. ALONZO, M.D., New York.
CLARK, Dr. S. T., Lockport, N. Y.
CLYMER, Dr. MEREDITH, New York.
COLVIN, Dr. D., Clyde, N. Y.
CORSON, Dr. JOHN W., Orange, N. J.
COX, Dr. GEO. M., Springfield, Mo.
CROSBY, Prof. A. B., M.D., New York.
CUTTER, Dr. EPHRAIM, Woburn, Mass.
CUTTER, Dr. GEO. R., New York.

D.

DA COSTA, Prof. J. M., Philadelphia, Pa.
DAVIS, Dr. G. PIERREPONT, Hartford, Conn.
DAWSON, Dr. B. F., New York.
DIMOCK, Dr. SUSAN, Boston, Mass.
DOUGLAS, Dr. A. T., Rondout, N. Y.
DUNGLISON, Dr. R. J., Philadelphia, Pa.
DUPUY, Dr. EUGENE, New York.

E.

ELDRIDGE, Dr. STUART, Hakodato, Japan.
ERICHSEN, Prof. JOHN ERIC, E. London.

F.

FLINT, Prof. AUSTIN, M.D., New York.
FRANK, Dr. T. F. Titusville, Pa.
FRYER, Dr. B. E., Surgeon U. S. Army.

G.

GAY, Dr. C. C. F., New York.
GLASGOW, Dr. W. C., St. Louis, Mo.
GODON, Dr. F. W., New York.
GOULEY, Prof. J. W. S., M.D., New York.
GROSS, Prof. S. D., M.D., Philadelphia, Pa.

H.

HALL, Dr. JAMES A., Elmira, N. Y.
HALL, Dr. WILLIAM E., New York.
HAMILTON, Dr. ALLAN MCLANE, New York.
HAMILTON, Prof. FRANK H., New York.
HAMMOND, Prof. W. A., M.D., New York.
HENLY, Dr. A. T., Macon Station, Alabama.
HOLDEN, Dr. E., Newark, N. J.
HOWE, Dr. JOSEPH W., New York.
HOUGH, Dr. JOHN STOCKTON, Philadelphia.
HUNTER, Dr. A. S., New York.
HUNTINGTON, Dr. A., New York.

J.

JACOBI, Prof. ABRAM, M.D., New York.
JACOBI, Dr. MARY PUTNAM, New York.
JANEWAY, Prof. E. G., M.D., New York.

K.

KEARNEY, Prof. J. H., M.D., Cincinnati, Ohio.
KELSEY, Dr. CHARLES, New York.
KEYES, Prof. E. L., M.D., New York.
KIP, Dr. ISAAC L., New York.
KNAPP, Dr. HERMANN, New York.
KRACKOWIZER, Dr. Ernst, New York.

L.

LAUDERDALE, Dr. J. V., Ass't Surgeon U. S. Army.
LEAMING, Prof. JAMES R., M.D., New York.
LEALE, Dr. CHARLES A., New York.
LEFFERTS, Dr. GEORGE M., New York.
LENTE, Dr. FREDERICK D., Cold Spring, N. Y.
LINCOLN, Dr. R. P., New York.
LOOMIS, Prof. A. L., M.D., New York.
LORING, Dr. E. G., New York.

M.

MARKHAM, Dr. H. C., Winthrop, Iowa.
MASON, Prof. ERSKINE, M.D., New York.
MATHEWSON, Dr. A., Brooklyn, N. Y.
MATTISON, Dr. J. B., Chester, N. J.
MAURY, Dr. T. F., Philadelphia, Pa.
MITCHELL, Dr. GEORGE H., House-Surgeon St. Peter's Hospital, London.
MOORE, Prof. E. M., M.D., Rochester, N. Y.

MORSE, Dr. W. H., New York.
MUNSON, Dr. W. W., Otisco, N. Y.
MURRAY, Dr. ALEXANDER, New York.

N.

NEWMAN, Dr. ROBERT, New York.
NOYES, Prof. HENRY D., M.D., New York.

O.

OLESON, Dr. C. W., Bloomingdale, Ill.

P.

PARKER, Dr. THEODORE, New York.
PEUGNET, Dr. EUGENE, Fordham, N. Y.
PIFFARD, Dr. HENRY G., New York.
PINKHAM, Dr. H. G., Lynn, Mass.
POST, Prof. ALFRED C., M.D., New York.
POST, Prof. GEO. E., M.D., Beirut, Syria.
PROUT, Dr. J. S., Brooklyn, N. Y.

R.

ROBINSON, Dr. BEVERLEY, New York.
ROCKWELL, Dr. A. D., New York.
RODMAN, Dr. W. B., Frankfort, Ky.
ROSE, Dr. A., New York.
RUMBOLD, Dr. T. F., St. Louis, Mo.
RUSSEL, Dr. CHAS. P., New York.

S.

SALISBURY, Dr. A. H., Minneapolis, Minn.
SANDS, Prof. HENRY B., M.D., New York.
SATTERTHWAITE, Dr. T. E., New York.
SAYRE, Prof. LEWIS A., M.D, New York.
SCHWEIG, Dr. GEO. M., New York.
SEGUIN, Dr. E. C., New York.
SHEFFIELD, Dr. D. A., New York.
SIMON, Prof. GUSTAV, Heidelberg.
SIMMONS, Dr. D. B., Yokohama, Japan.
SKENE, Prof. A. J. C., Brooklyn, L. I.
SMITH, Dr. A. H., New York.
SMITH, Dr. GEO. C., Rondout, N. Y.
SMITH, Dr. J. LEWIS, New York.
SPEIR, Dr. S. FLEET, Brooklyn, N. Y.
STURGIS, Dr. F. R., New York.

T.

THOMAS, Prof. T. GAILLARD, M.D., New York.
THOMSON, Dr. GEO., New York.

V.

VAN BUREN, Prof. WILLIAM H., M.D., New York.
VAN WYCK, Dr. R. C., Culpepper Co., Va.

W.

WALES, Dr. PHILIP S., U. S. Navy.
WARD, Prof. SAM'L B., M.D., New York.
WARNER, Dr. L. C., New York.
WATERMAN, Dr. S., New York.
WEIR, Dr. ROB'T F., New York.
WHITALL, Dr. S., New York.
WILLIAMSON, Dr. J., Ottumwa, Iowa.
WOODWARD, Dr. J. J., Ass't Surgeon, U. S. Army.

Societies and Institutions from which Reports have been furnished.

AMERICAN MEDICAL ASSOCIATION.
BELLEVUE HOSPITAL, New York.
BELLEVUE HOSPITAL MEDICAL COLLEGE, New York.
BROOKLYN CITY HOSPITAL, Brooklyn, N. Y.
BUFFALO GENERAL HOSPITAL, Buffalo, N. Y.
CHARITY HOSPITAL, Blackwell's Island, N. Y.
COLLEGE OF PHYSICIANS AND SURGEONS, New York.
EPISCOPAL HOSPITAL, Philadelphia, Penn.
JEFFERSON MEDICAL COLLEGE, Philadelphia, Penn.
LONG ISLAND COLLEGE HOSPITAL, New York.
MEDICAL COLLEGE OF BEIRUT, Syria.
MEDICAL SOCIETY OF COUNTY OF KINGS, New York.
MEDICAL SOCIETY OF COUNTY OF NEW YORK.
MEDICAL SOCIETY OF EASTERN DISPENSARY.
MEDICAL SOCIETY OF STATE OF NEW YORK.
NEW JERSEY STATE MEDICAL SOCIETY.
NEW YORK ACADEMY OF MEDICINE.
NEW YORK MEDICAL LIBRARY AND JOURNAL ASSOCIATION.
NEW YORK MEDICO-LEGAL SOCIETY.
NEW YORK NEUROLOGICAL SOCIETY.
NEW YORK PATHOLOGICAL SOCIETY.
NEW YORK SOCIETY OF NEUROLOGY.
PENNSYLVANIA HOSPITAL, Penn.
PHILADELPHIA HOSPITAL, Philadelphia, Penn.
PRESBYTERIAN HOSPITAL, New York.
ROOSEVELT HOSPITAL, New York.
UNIVERSITY MEDICAL COLLEGE, New York.

INDEX.

A.

ABDOMEN, gunshot wound of, 73; diagnosis of enlargement of, 396; pain and cramps in, as symptoms, 427.
Acne, treatment of, 235, 424.
Adams, Dr. J. Q., fract. temporal bone, 288.
Address on practical medicine, 312.
Adhesive plaster, first employment of, 157.
Agassiz, Prof. Louis J. R., death of, 24.
Age, ameliorating the effects of, 446; relation of, to medical work, 293.
Agent, an honest (life insurance) necessary, 168.
Air-passages, abnormal conditions of, 477.
Albumen, how to treat with nitric acid, 546.
Alcohol, influence of, on heart, 403; and the profession, 357.
Allen, Dr. Nathan, law of longevity, 108; appendix vermiformis, 579.
American Medical Association, 70, 216, 302, 305, 323, 380.
American Public Health Association, 640.
Ammonæmia, new views on, 370.
Amputations, periosteal, flaps in, 572.
Amyl colloid in shingles, 176.
Amyl, valerianate of, 402.
Anæsthetics, unnatural position of head, cause of death from, 403.
Aneurism; treated by horse-hairs, 376; lecture on, 561, thoracic, case of, 653.
Angina, treatment of, 120, 147.
Animal vaccination, remarks on, 22.
Anstie, Dr. Francis Edmund, death of, 551.
Anus, fissure of, 585.
Apollinaris water, 292.
Apomorphia as an expectorant, 540.
Army medical staff rank, 13, 38, 47, 70, 72, 79, 125, 136, 204, 311, 373.
Army news, 24, 45, 79, 135, 192, 215, 247, 270, 303, 328, 381, 471, 416, 439, 496, 526, 550, 607, 663.
Arsenical poisoning from green carpet, 68; from wall-papers, 528.
Arteries, ligation of, 88.
Aspergillus in external auditory canal, 86.
Aspirator, use of in retention, 117, 343; an impromptu, 438.
Asthma, spasmodic, treatment of, 507.
Atheroma of cerebral vessels, 302.
Auditory canal, parasitic growth in the, 344.
Aveling's apparatus for transfusion, 190.

B.

Bacteria and disease, 121.
Barker, Dr. Fordyce, on transfusion, 187; review of work by, 294; age in relation to child-bearing, 658.
Basham's mixture, formula for, 546.
Baylis, Dr., death of, 191.
Bead, inhalation of, 212.
Beard, Dr. Geo. M., central galvanization, 172; hemiplegia, 265; uses of electricity, 354.
Beef, raw, in irritable stomach, 143.
Beer, poisoning by colchicum in, 369.
Bellevue Hospital, changes in, 439, 526; reports from, 9, 64, 88, 119, 144, 176, 235, 345, 368, 400, 426.
Bellevue Hospital Medical College, 158.
Bennett, Dr. W. H., on superior air-passages, 477.
Bichloride of methylene, merits of, 252.
Bigelow, Dr. H. R., acute insanity, 455.
Biliary calculi, case of, 408.
Biliary ducts, cancer of, 40.
Bizzell, Dr. W. D., aspergillus, 86.
Black, Dr. J. R., hygiene and therapeutics, 133; longevity, 497.
Bladder, abscess of, 186; extraction of foreign bodies from, 117, 468; aspiration of, 234; removal of tumor of, 483; exploration of female, by finger, 604; catheter for irrigating the, 627; rupture of, from kick, 635.
Blake, Dr., on sanguinolent tumor, 42.
Blennorrhagia, treatment of, 260.
Blindness, causes of, 599.
Blood, action of iodid. potas. on, 528; overlooked source of supply of, 346; stains of, 513; hypodermic injection of, 458; spectroscopic analysis of, 531.
Boils, treatment of, 428.
Bones, to increase the growth of, 36.
Bowen, Dr. W. Shaw, parasitic growth in auditory canal, 344.
Boyland, Dr. G. H., notice of work by, 15.
Bozeman, Dr. N., letter from, 604.
Brain, destruction of one of the hemispheres of the, 260; staining of, for miscroscope, 292; experiments upon the, 346; tumor of, 651.
Brain-workers, longevity of, 665.
Breast, adenoma of, 635.
Briddon, Dr. C. K., cancerous breast, 213; cancer of omentum, 411.
Bright's disease, treatment of, 65, 119, 546, 574.
Brodie, Dr. W., address by, 305.
Bromine and its compounds, 238.
Bronchial gland, rupture of, 572; enlarged, and wheezing respiration, 636.
Bronchial tube, rupture of, during coughing, 29; fibrinous casts of, 41, 78.
Brooklyn City Hospital Reports, 145, 345, 634.
Brown, Dr. Harvey E., notice of work by, 15.
Buck, Dr. A. H., causes of 1,000 deaths, 49; mortality of phthisis, 105.
Buck, Dr. Gurdon, cicatrices from burns, 473.
Buffalo General Hospital Reports, 662.
Bull, Dr. C. S., traumatic paralysis of rectus and inferior oblique muscles, 366.
Bull, Dr. R. W., death of, 608.
Bumstead, Dr. F. J., tunnelled urethral instruments, 45; antiquity of syphilis, 244.
Bunion, resection as a remedy for, 200.
Burnett, Dr. S. M., nervous deafness, 420.
Burns, treatment of, 234; contractions from, 473.

C.

Calabar bean in tetanus, 536.
Calculi, cases of, from Beirut, 186.
Calculus, expulsion of, 12; case of salivary, 510.
Campbell, Dr. W. N., lumbar hernia, 142.
Cancer, treatment of, 197, 213, 280, 290.
Cardiac sedative, quinine as, 285.
Caro, Dr. S., swallowing a shawl-pin, 214, 242, 285.
Carpenter, Dr. Wesley M., hospital reports of, 9, 64, 88, 119, 143, 176, 234, 296, 345, 368, 400, 426.
Carter, Dr. R. B., waste of life, 333, 386.
Castle, Dr. F. A., puerperal fever in Bellevue Hospital, 461.
Catarrh, bronchial, treatment of, 450.
Catheter, self-retaining, 215.
Catheterism, peculiar, 409.

Cavities, pulmonary, hypodermic injection of, 578.
Central galvanization compared with other methods of using electricity, 172.
Cerebral hemorrhage and apoplexy of kidneys, 516.
Cerebral hemisphere, physiology of, 376.
Cerebro-spinal meningitis, cases of, 60, 292.
Cervix uteri, polypoid elongation of, 509.
Circumcision, notice of work on, 431.
Charity Hospital reports, 143.
Chancre, treatment of, 568.
Chandler, Dr. Chas. F., mortality of New York, 223.
Child-bearing, age in relation to, 657.
Children, diseases of, notice of work on, 325.
China, physiology in, 384.
Chinese and Japanese, physical types compared, 163.
Chloral in cancer, 257; treatment of poisoning by, 328; combined administration of, with morphia and atropia, 637.
Chlorate potash, topical use of, 259.
Chloroform, death from, 248, 542.
Cholera discharges, action upon animals, 35; transmission of, 95.
Cholesterine, injection of, 259.
Chromic acid and glycerine, danger of mixing, 347.
Chronic diarrhœa, treatment of, 345.
Clark, Dr. S. T., epidemic colitis, 61.
Cleft palate, new operation for, 92, 402.
Climate, question of, in phthisis, 297.
Clinical medicine, Trousseau's review of, 14.
Club-foot, clinical lecture on, 361; treatment of, 401.
Cod-liver oil, tasteless, 234; use of, 299.
Code of ethics; revision of, 309; remarks on the, 573.
Colitis, epidemic, an unusual type of, 61.
College of Physicians and Surgeons, commencement, 158.
Colloid cancer of gall-bladder, 301.
Colotomy, 299.
Colvin, Dr. D., on life insurance agents, 168.
Conjunctiva, cancer of, 243.
Confederate surgeons, convention of, 304.
Consultations in the country, 181.
Consumption, mortality of, 329, 445; notice of work on, 407; treatment of, 546.
Contagious diseases, reports on, 80.
Corpus luteum, age of, 211.
Corpus callosum, absence of, 664.
Corson, Dr. John W., general treatment of pleurisy, 622.
Coryza, new treatment for, 8; fluid discharges of, 402.
Cough of phthisis, treatment of, 297.
Cox, Dr. Geo. M., insurance examiners, 277.
Cremation, 248, 287.
Crosby, Dr. A. B., perforation of mastoid cells, 20; talipes varus, 18.
Croton chloral-hydrate in insanity, 455.
"Croton Oil Paint" in pleurisy, 622.
Croupous pneumonia, statistics of, 370.
Cruveilhier, Dr. J., death of, 191.
Cutter, Dr. E., sore nipples, 180.
Cystitis, local treatment in females, 512.

D.

Da Costa, Dr. J. M., acute articular rheumatism, 481; clinical cases, 537.
Dalton, Dr. J. C., on spectroscope, 599.
Danish treatment of joint affections, 2.
Davis, Dr. G. Pierrepont, vertical luxation of patella, 627.
Davis, Dr. N. S., address on medicine, 312.
Dawson, Dr. B. F., bichlor. methylene, 252; on ovariotomy, 638.
Deafness, nervous, origin of some forms of, 420.
Deaths, 1,000, inquiry into causes of, 49.
Deformities, inheritance of, 527.
Delafield, Dr. F., cancer of stomach, 579; dilatation of heart, 652.
Diarrhœa of phthisis, 577.
Diagnosis, a question of, 208.
Dictionary, medical, notice of, 264.
Digestion and absorption in the large intestine, 459.
Digitalis, hypodermics of, 119; stupes of, as diuretics, 400.
Dimock, Dr. Susan, rudimentary uterus, 423; recto-vaginal fistula, 458.
Diphtheria, treatment of, 144, 183, 260, 347, 577.
Diseases of women, notice of work on, 324.
Dissection, legalized, 191.
Doremus, Dr. R. O., on poisoning, 602.
Douglas, Dr. A. T., novel method of extracting a glass tube from the bladder, 117.
Drainage and sewerage, Dr. M. Morris on, 129.
Drinking-water, contaminated, 517.
Dupuy, Dr. E., physiology of cerebral hemispheres, 376.
Dust, influence of, on health, 273, 442, 556, 369; 669.
Dysentery, chronic, treatment of, 9, 12, 537.
Dyspepsia, remarks on, 297, 422, 483.

E.

Ear, fibromata of, 636.
Early maternity, case of, 536.
Earth as a surgical dressing, 141, 547.
Eczema, treatment of, 350.
Elastic ligature, 118.
Elastic thread, 91.
Elbow, exsection of, 213; luxation backwards, 207.
Eldridge, Dr. Stuart, catheter for irrigating the bladder, 627
Electrical force, resistance of body to, 375.
Electricity, uses of, 354, 601; notice of work on, 430.
Electro-cautery, notice of work on, 295.
Electrolysis in stricture, 100; extraordinary case of, 384.
Electrolyzing the base, 99.
Embolism, multiple, etc., 495, 542.
Emetics, contribution to the study of, 146.
Emotional insanity, 358.
Employments, health of different, 609.
Epilepsy, albuminuria as a symptom of, 347; treatment of, 403, 549.
Epiphyseal fracture of the head of the humerus, 353.
Episcleral melanotic sarcoma, 23.
Episcopal Hospital reports, 592.
Epistaxis, sero-albuminous, 147; treatment of, 437.
Epithelioma of cervix uteri, 396.
Ergot poisoning, a case of, 471.
Ergotine, hypodermic injection of, 260.
Erichsen, J. E., on anchylosis, 599.
Esmarch's bloodless operations, 59, 133, 146, 257, 380, 592. 655.
Ether, administration of, 9.
Exchanges, articles on, 15, 75, 123, 147, 203, 245, 267, 296, 347, 372, 472, 521, 594.
Extension by adhesive plaster, first employment of, 157.

F.

Fallopian abscess, 579.
Faradic baths, uses of, 647.
Fees, question of, 336.
Femoral artery, ligation of, 321.
Femoral hernia, unreduced, 635.
Fibrous anchylosis, lecture on, 449.
Finnell, Dr. T. C., corpus luteum, 211; cancer of liver, 650.
Fiset, Dr. G. Morrison, puerperal convulsions, 342.
Fisher, Dr. A. R., massage on joint affections, 2.
Fistula in ano, lecture on, 505.
Flatus, a pill for, 234.
Flint, Dr. A., fibrinous casts of bronchial tubes, 41.
Fœtus, influence of chloroform on, 460.
Food, poisonous adulteration of, 471.
Forearm, dislocation, treatment of, 341.
Fractures, different plans of treating, 10, 101, 143, 145, 235, 353, 363, 400, 414, 576, 593.
Fragilitas ossium, 404.

Frank, Dr. T. F., electrolysis in stricture, 62.
Fryer, Dr. B. E., transfusion, 201.
Furuncular affection, sulphides in, 257.

G.

Gall-bladder, cancer of, 407; rupture of, from fall, 578.
Galvano-therapeutics, notice of work on, 296.
Gardner, Dr. John, on old age, 446.
Garretson, Dr. J. E., notice of work by, 15.
Gastritis, subacute, heat of, 9.
Gastrotomy for uterine tumors, 122.
Gay, Dr. C. C. F., surgical cases, 662.
Gelatine, medicated, 147.
Glasgow, Dr. W. C., on residual air, 63.
Glioma retinæ, 209, 494.
Glioma-sarcoma of upper thigh, 185.
Goitre, exophthalmic, treatment of, 596.
Godon, Dr. F. W. fuller's earth as a dressing, 141.
Gonorrhœa, treatment of, 234.
Gonorrhœal epididymitis, structural changes in, 347.
Gouley, Dr. J. W. S., tunnelled urethral instruments, 90.
Gout, treatment of, 9.
Graafian vesicle, retrograde metamorphosis of, 539.
Grape cure, the, 527.
Great toe, resection for abduction of, 200.
Griffith's formulary, review of, 206.
Griscom, Dr. John H., death of, 271, 304.
Gross, Dr. S. D., cases from clinic of, 587.

H.

Hæmoptysis, 193, 298, 577.
Hæmorrhoids, lecture on, 393, 417.
Hairy men, 48.
Hall, Dr. James A., aspiration for retention, 343.
Hall, Dr. W. E., chronic pachymeningitis, 19; tumor of the abdomen, 211.
Hallux valgus, resection for, 200.
Hamilton, Dr. F. H., separation of upper epiphysis of humerus, 231; warm water in surgery, 249.
Hammond, Dr. W. A., effects of alcohol, 266; on the rights of independent criticism, 488.
Hand, back of, as thermometer, 119.
Hay-fever, experimental observation on, 424.
Heart, fatty degeneration of, in women dying of syncope after delivery, 122; disease of, from overwork, 260; disease and œdema of left upper extremity, 292; influence of tobacco and alcohol on, 403; dilatation of, 652.
Hematometra, case of, 527.
Hemiplegia, treatment of, 265; curious cases of, 345.
Henly, Dr. A. T., case of stabbing, 423.
Hernia, reduction of internal, 12; treatment of, without opening the sac, 137; incarcerated, case of, 494.
Heywood Smith's scissors, 215.
Hip, dislocation of, in woman aged 73; exsection of, 432.
Homœopathy in England, 528.
Holden, Dr. E., laryngeal pathology, 287.
Holston, Dr., health of, 304.
Hospital for the Ruptured and Crippled, report from, 401.
Hospital appointments, 69, 94, 183, 429.
Howard, Dr. E. L., emotional insanity, 358.
Howe, Dr. Joseph W., transfusion, 171.
Hough, Dr. John Stockton, on longevity, 55.
Hudson Co. Medical Society, 47.
Humerus, separation of upper epiphysis of, 231; exsection of head of, 494.
Hunter, Dr. A. S., a new speculum, 606.
Huntington, Dr. A., light weights as life insurance risks, 441.
Hydrocele, treatment of, 587.
Hydrocephalic fœtus, new method of delivering, 260.
Hydro-chloral in vomiting of pregnancy, 284, 549.
Hydro-peritoneum, remarks on, 369.
Hydrocyanic acid, poisoning by, 328.
Hydrophobia, remarks on, 347, 359, 378, 415, 402, 405, 436, 469, 485, 524, 581.
Hydrostatic therapeutics, 96.
Hygiene and therapeutics, 133, 273.
Hymen, removal of, 396.
Hyrtl, Prof., retirement of, 248.

I.

Ilium, fracture of, 578.
Illuminator, a new, 46.
Inanition, delirium from, 175.
Incremation and urn burial, 192.
Inebriety, what is habitual, 279.
Infantile spinal paralysis, 25.
Inflammation theory, 627.
Insane asylums, regulation of, 136.
Insanity, pathology and treatment of, 98, 229, 455, 504.
Insuring of unsound lives, 336.
International Sanitary Conference, 472.
Intestine, injection of large quantities of water in, 12; conditions of interfering with colotomy, 301; relief of obstruction of, 571.
Intussusception, a successful case of abdominal section for, 36; cases of, 75, 184.
Iodic acid as hypodermic injection, 322.
Iodide of potassium in thoracic aneurism, 144.

J.

Jacobi, Dr. A., embolic abscesses, 542; septic enteritis, 601.
Jacobi, Dr. Mary Putnam, hemorrhage from ovisacs, 410.
Japan, a medical journal in, 550.
Janeway, Dr. E. G., colloid cancer of gall-bladder, 301, 407; rupture of gall-bladder, 578; Fallopian abscess, 579; rupture of bladder from kick, 635: tumor of brain, 651.
Jaundice, liver in, 424.
Jaw, necrosis of, 542.

K.

Kalpokleisis, case of, 604.
Kearney, Dr. T. H., wound of tendo-Achillis, 367.
Kelsey, Dr. Chas., perityphilitis, 511; 649.
Keys, Dr. E. L., nasal polypus, 211; review of work by, 632.
Kip, Dr. Isaac L., mortality of consumption, 329.
Knapp, Dr. H., glioma retinæ, 209, 494; rodent ulcer, 210; ophthalmoscope and optometry, 30, 179.
Krackowizer, Dr. E., perineal lithotripsy, 169.

L.

Lactic acid, 322.
Lameness, intermitting, 344.
Laryngeal pathology, contribution to, 287.
Laryngeal phthisis, papers on, 81, 113, 128.
Laryngeal polypi, notice of work on, 39.
Laryngeal spray syringe, a new, 480.
Larynx, gargles to interior of, 11; primary affection of, and phthisis, 68; extirpation of, 122, 175, 257; contusion of, 231; mucous membrane of, 289; ring in the, 641.
Lauderdale, Dr. J. V., Esmarch's method, 380.
Lead, poisoning from, in enamel, 539; washes for eye, 590.
Leaming, Dr. Jas. R., hæmoptysis, 193.
Leale, Dr. Chas. A., cerebral atheroma, 302.
Lefferts, Dr. G. M., fibroid growths on vocal cords, 57; ring in the larynx for four years, 641.
Lente, Dr. F. D., thrombus of pulmonary artery, 209; transfusion, 377; nephrotomy, 410; case of hydrophobia, 469; hypodermic use of quinine, 525.
Libel suit against THE MEDICAL RECORD, 485.
Life Insurance, Medical Department of, 49.
Life insurance, moral hazard in, 54; law of longevity in, 108; medico-legal aspects of, 218; examinations, 167; practically considered, 553; duties of medical officer of, 275.

Life policy, remarkable action on, 112.
Light weights as life insurance risks, 441.
Lime sugar glycerine, 146.
Lincoln, Dr. D. F., electrical force, 375.
Lincoln, Dr. R. P., laryngeal phthisis, 81, 113; retro-pharyngeal abscess, 457.
Lithotomy, bilateral, 510.
Lithotrity and death from nervous prostration, 185.
Liver, acute atrophy of, 544; cancer of, 650.
Lives (life insurance), medical experts in the selection of, 222.
Livingstone, Dr., identification of the remains of, 272.
Locomotor ataxia, 9.
Loines, Dr. Jonas P., death of, 47. 71, 80.
Loomis, Dr. A. L., cancer of stomach, 207; pyonephrosis, 409; pachymeningitis, 464.
Longevity, influence of city and country life on, 55; law of, 109; effects of intemperance on, 280; remarks on, 391, 616; brain work, relation of, to, 665.
Loring, Dr. E. G., on optometry, 132.
Lumbar colotomy, 209.
Lumbar hernia, case of, 142.
Lunacy Commissioners, 237.
Lunacy, laws relating to, 157, 551.
Lungs, malformation of, 572.

M.

Malaria, influence of, on longevity, 497.
Male genital organs, electro-therapeutics of, 346.
Malignant pustule, pathology of, 258; from picking horse-hair, 628.
Malarial fevers, origin of, 512, 571.
Malpractice, proposed law for, 527.
Mammary menstruation, case of, 68.
Man, the normal, 612.
Marine Hospital service of United States, 191, 374.
Markham, Dr. H. C., episcleral melanotic sarcoma, 24; excision of spleen, 482.
Marsh plant, the, 122.
Massage on joint affections, 2.
Mason, Dr. E., recto-vesical fistula in male, 20; hernia, treatment of, without opening the sac, 137, 494; colotomy, 209, 301; on piles, 393, 417; rough catheterism, 409; fistula in ano, 505; fissure of anus, 585.
Mastoid cells, new instrument for perforating, 19; cases of perforation of, 140.
Maternity Hospital, the new, 541.
Mathewson, Dr. A., eye-washes, 589.
Mattison, Dr. J. B., neuralgia, 227.
Maury, Dr. T. F., on chancre, 568.
McCready, Dr. B. W., resignation of, 248.
McNaughton, Dr. James, death of, 416.
Measles, German, 291; in public conveyances, 398.
Medical and Surgical History of the War, 177.
Medical charities, abuse of, 160.
Medical Department of the U. S. Army, notice of a work on, 15.
Medical examinations for life insurance, 277, 392, 385.
Medical jurisprudence, review of works on, 40.
Medical schools and graduates, 48.
Medical Society of County of New York, reports, 20, 71, 128, 653.
Medical Society of County of Kings, N. Y., report, 151.
Medical Society of Eastern Dispensary, 267.
Medical Society of the State of New York, meeting of the, 95.
Medicated candles, 157.
Medicine, practical, notice of work on, 264.
Membrana tympani, diagnosis of perforation of, 174.
Memphis, medical men victims of yellow fever in, 104.
Meningitis, subacute, 242.
Menorrhagia, case of, 395.
Menstruation, deranged, 451; review of work on, 519.
Mercury, oleates of, 84.
Merkel, Gottlieb, Dr., on dust, 273. 274.
Messenger, Dr. J., atrophy of liver, 544.
Midwifery, review of a system of, 127.
Milliken, Dr. M. G., death of, 439.
Miscarriage, frequent cause of, 372.
Mitchell, Dr. Geo. H., wound of tendo-Achillis, 267.
Morbus coxarius, cases of, 206, 465, 650.
Molesworth's dilator, value of, 244.
Moore, Dr. E. M., epiphyseal fracture of the head of the humerus, 353.
Morse, Dr. W. H., vomiting of pregnancy, 549.
Mortality of New York, 223; experience of twenty-five years, 277; in different cities, 559.
Mouth, new method of suppressing hemorrhages in operations upon, 341.
Muller, Dr. A., vaccination, 329.
Munson, Dr. W. W., cerebro-spinal meningitis, 60.
Murray, Dr. Alex., dislocation of forearm, 341.
Mycosis, intestinal and malignant pustules, 258.
Myxoma of thigh, 494.

N.

Nares, posterior, improved syringe for, 247.
Nasal catarrh, treatment of, 8, 479; douche, uses of, 398, 549; polypus, novel method of extracting, 211; speculum, a new, 215.
Naso-pharyngeal polypus, 258.
Nephrotomy, remarks on, 409, 412, 603.
Nervous system, general therapeutics of, 281, 337; physiology of, 617.
Neuralgia, trifacial, injection of chloroform in, 227.
New Jersey State Medical Society, 848.
New York Hospital, The, partially resuscitated, 192.
New York, a medical centre in, 93; law to regulate the practice of medicine in, 384.
New York Academy of Medicine, reports, 22, 187, 238, 265, 599, 637.
New York Medical Library and Journal Association, 128, 377, 432, 580, 601.
New York Medico-Legal Society, reports, 72, 602.
New York Neurological Society, 266.
New York Pathological Society, reports, 18, 41, 74, 183, 206, 242, 299, 407, 463, 494, 542, 574, 635, 650.
New York Society of Neurology, reports, 375, 637.
Newman, Dr. R., embolism of pulmonary artery, 465.
Night-sweats, treatment of, 143, 299, 546, 576.
Noyes, Dr. H. D., caries of middle ear, 19.
Nursing, questions concerning, 9; as a science, 263.

O.

Oakum for drainage, 400.
Œsophagus, diseases of, 1.
Ointment for granulating sores, 426.
Old men, 278.
Oleson, Dr. C. W., poisonous adulteration of food, 471.
Omentum, cancer of, 411.
Ophthalmoscope, a new, 32.
Ophthalmoscopic optometry, 30, 132, 179.
Os coccyx, malformation of, 242.
Otago University, 304.
Ovarian tumors, review of work on, thirty-nine cases of, 123, 541; drainage tubes and intra-peritoneal injections in, 371.
Ovariotomy, remarks on, 638.
Ovisacs, hemorrhage from the, 410.

P.

Pachymeningitis, cases of, 19, 464.
Paget's sanguinolent tumor, case of, 42.
Palmar fascia, contractions of, 580.
Palpitation, treatment of, 119.
Paralysis, spinal, nature of, 637.
Paraphymosis, treatment of, 347.
Parenchymatous injections of iodine into acutely inflamed tissues, 67.
Parker, Dr. Theodore, life insurance, 553.
Paronychia, treatment of, 547.
Parotitis, with translation to brain, 514.
Patella, vertical luxation of, 627.
Pathological anatomy, microscopic slides for, 381.
Pelvic hematocele, cases of, 508.

Pennsylvania Hospital reports, 545.
People, education of, 294.
Perinæum, laceration, notice of work on, 519.
Perineal lithotripsy, 169.
Periosteal flaps in amputations, 572.
Periostitis, early treatment for, 540, 587.
Peritonitis, waxy, case of, 74.
Perityphlitis, cases of, 255, 463, 511, 570, 649.
Permanent membership in State Society, 129.
Pertussis, fatal cases of, 184.
Peugnet, Dr. E., waxy peritonitis, 74; gunshot wounds of abdomen, 72.
Phenic acid, antidote to, 35.
Philadelphia Hospital, reports of, 574.
Philadelphia, medical matters in, 582, 659.
Phosphorus, carbon as antidote to, 68; new solvent for, 175; review of work on necrosis of, 520.
Phthisis, treatment of, 10, 92, 105, 120, 163, 296, 546.
Physician's dose-book, notice of, 430.
Physiology in China, 384; review of work on, 492.
Physostigma venenosum, use of, 537.
Piffard, Dr. H. G., spectral analysis, 605.
Piles, lectures on, 393, 417.
Pine Ridge Papers on hydrophobia, 415, 436, 524, 581.
Pinkham, Dr. J. G., new wire speculum, 45.
Placental syphilis, 371.
Plants, inner life of, 91, 630.
Pleurisy of children, review of work on, 38; subacute and absence of rational signs, 428; treatment of, 622.
Pneumo-thorax, remarks on, 426, 458.
Pneumonia, walking, 89; treatment of, 65, 143, 345, 400, 538, 545.
Poisoning, cases of, 430; spectroscopic examination of, 534; medical jurisprudence of, 602.
Post, Dr. A. C., lithotrity, 185; bursal swelling, 464; necrosis of jaw, 542; contractions of palmar fascia, 580.
Post, Dr. George E., surgical cases, 186, 510.
Post-mortem, new method of making, 300.
Practice of medicine, law to regulate in New York, 384, 584.
Pregnancy, early diagnosis of, 34; treatment of vomiting of, 284.
Preventable disease, waste of life by, 333, 386.
Procidentia uteri in a virgin, 509.
Progress Medical Science, 10, 34, 66, 91, 120, 146, 175, 235, 257, 289, 321, 346, 369, 402, 424, 460, 484, 539, 571, 595.
Prostitution, remarks on, 316.
Prout, Dr. J. S., treatment of coryza, 8; on American Medical Association, 303.
Pruritus hiemalis, a new skin disease, 121.
Public, our influence with the, 160.
Puerperal diseases, review of work on, 294; treatment of, 151, 342, 461.
Pulmonary artery, embolism of, 465.
Pulmonary cavities, treated by injection through the chest-wall, 321.
Purgatives, action of, 290.
Putty (glaziers'), use of in surgery, 292.
Pyæmia and hospitalism, 259.
Pyo-nephrosis, case of, 409, 427.

Q.

Quackery, exposure of, 126.
Quarantine of yellow fever and cholera, 95.
Quinine as a cardiac sedative, 285; hypodermic use of, 368, 525.

R.

Rank, relative against positive, 156.
Reception hospitals in the city, 182.
Recto-vaginal fistula, case of, 458.
Recto-vesical fistula in male, 20.
Rectum, stricture of, 588; prolapsus of, 603; passage of hand into, 603.
Rectus oculi, paralysis of, 366.
Red Sulphur Springs for lung troubles, 5.
Relapsing fever; blood in case of, 572.
Renal apoplexy and cerebral hemorrhage, 290.
Renal cyst, case of, 603.
Reorganization of the American Medical Association, 205, 261.
Resection of joints during Franco-German campaign, 236.
Residual air, remarks on, 63.
Rest in phthisis, 484.
Retention cysts in female urethra, 175.
Retro-pharyngeal abscess, 457; following diphtheria, 212.
Rheumatism, acute articular, lecture on, 481, 456; treatment of, 143, 592.
Rickets, artificial propagation of, 259; treatment of, 290, 291.
Rights of independent criticism, 485.
Roberts, Dr. W. C., death of, 24, 46.
Robinson, Dr. Beverley, diseases of œsophagus, 1; contusion of larynx, 231; nasal douche, 398; notice of work by, 632.
Rockwell, Dr. A. D., electrolytic treatment of cancer, 197; electro-therapeutics of male genital organs, 364; electricity in children's diseases, 601.
Rodman, Dr. W. B., septicæmia, 327.
Rokitansky, Carl, greeting of New York Pathological Society to, 540.
Roosevelt Hospital, reports, 10, 119, 234, 592.
Rose, Dr. A., resection for bunion, 200.
Rubber nipples, parasitic growths on, 371.
Rumbold, Dr. T. F., on membrana tympani, 174.
Russel Dr. C. P., on hydrophobia, 359, 378.

S.

Salisbury, Dr. A. H., on hygiene, 273.
Sand, concretions of, in intestine, 258.
Sands, Dr. H. B., colotomy, 299; perityphlitis, 463; treatment of popliteal aneurism, 561; scissors swallowed by insane person, 650; address by, 654.
Sanitary bureau, a national, 355.
Sanitary regulations and life insurance, 560.
Satterthwaite, Dr. T. E., multiple embolism, 495; adenoma of breast, and femoral hernia, 635.
Saw-dust brandy, 414.
Sayre, Dr. L. A., morbus coxarius, 207, 213, 242, 432, 464, 650; inhalation of bead and tracheotomy, 212; fractures, 225, 414; on club-foot, 361; exsection of head of humerus, 494; fracture of ilium, 578; on anchylosis, 599.
Schools, sanitary inspection of, 629.
Sciatic nerve, removal of five inches of, 121.
Scissors swallowed by insane person, 650.
Scapula, fracture of neck of, 662.
Sea, mortality at, in 1873, 503.
Sections of the American Medical Association, 349, 350.
Seguin, Dr. E. C., infantile spinal paralysis, 25; therapeutics of nervous system, 281, 337; physiology of nervous system, 617.
Sell, Dr. E. H. M., ovariotomy, 544.
Septic enteritis, 601.
Septicæmia by auto-infection, 327.
Sero-sanguineous cysts, treatment of, 425.
Schweig, Dr. G. M., faradic baths, 648.
Shawl pin, swallowing of, 214.
Sheffield, Dr. D. A., wound of tendo-Achillis, 471.
Shortening of limbs after fracture, 303.
Shrady, Dr. Geo. F., army staff rank, 13, 38, 125, 149, 373; the State Society, 37; consultations in the country, 181; Amer. Med. Association, 205, 261, 323, 349; relations of age to work, 293; the meeting at Detroit, 325; hospital appointments, 429; rights of independent criticism, 485; contaminated drinking-water, 517; vivisection, 518, 542, 574, 661; Maternity Hospital, 541; Pine Ridge Papers, 415, 436, 524, 581; use of code of ethics, 573; relations of general medicine to specialism, 597; sanitary inspection of schools, 629.
Siamese twins, remarks on the death of, etc., 79, 131, 135, 157.

Silicate of lime splint, 426.
Simmons, Dr. D. B., vomiting of pregnancy, 284.
Simon, Prof. G., cases by, 603.
Single wrist-drop, 90.
Skene, Dr. A. J. C., diseases of menstruation, 451; dilator of, 303.
Skin, action of bromide of potassium on the, 121.
Small-pox, itching and pitting in, 144.
Smith, Dr. A. H., Esmarch's elastic webbing, 133.
Smith, Dr. Geo. C., perineal section, 117.
Smith, Dr. J. Lewis, diphtheria, 183; pleurisy, 208; retro-pharyngeal abscess, 212; bromine, 238; enlarged bronchial glands, 636; acute nephritis, 636.
Smith, Dr. Joseph Mather, annual prize, 136.
Sore nipples, treatment of, 180.
Sounds, audible and inaudible, 484.
Specialism, remarks on, 597.
Spectroscope; in forensic cases, 529, 605; absorption bands of, 509.
Speir, Dr. S. F., aspirator in retention, 117.
Spirometer, its value to life insurance companies, 555.
Spleen, excision of portion of, 482.
Sprague, Dr. H. M., death of, 464.
Stabbing, case of, 423.
State Society, meeting of the, 94, 101.
Stillwell, Dr. Jno. E., case of, 79.
Stokes case, medical jurisprudence of, 72.
Stomach, review of work on diseases of the, 127; irritable, a remedy for, 143; cancer of, 207, 579.
Strictures, multiple, treated by electrolysis, 62.
Strumous children, remarks on, 64; diseases of tarsal bones, 176.
Strychnine poisoning, inhalation of chloroform in, 345.
Sturgis, Dr. F. R., effect of syphilis upon the duration of life, 161, 217; on accidental poisoning, 471.
Sulphide of potassium, 236.
Sycosis, treatment of, 68.
Synovitis, treatment of, 368.
Syphilis, treatment of, 35, 575, 596; effect of, on duration of life, 161, 217; note on ancient history of, 243; brain affections during early stages of, 595.
Syphilitic strictures of rectum, notice of work on, 375.
Syringe, a new hypodermic, 438.

T.

Talipes varus, pathology of, 18.
Tape-worm, treatment of, 12, 156.
Tar cancer, 370.
Temporal bone, fracture of, 288.
Tendo-Achillis, wounds of, 267, 367, 470.
Tetanus, traumatic, treatment of, 536.
Thinkers and thinking, notice of work on, 15.
Thomas, Dr. T. G., clinical cases, 395, 508.
Thomson, Dr. W. H., thoracic aneurism, 653.
Thompson, Dr. Geo., nasal douche, 550.
Thrombus of pulmonary artery, 209.
Thyroid gland, stricture of, 371.
Tinea tonsurans, treatment of, 291.
Tissues, repair of, 628.
Tobacco, influence of, on heart, 403; and life insurance, 665.
Toe-nail, ingrowing, cure of, 484.
Toner, Dr. J. M., address by, 305.
Toothache, remedy for, 11.
Torsion forceps, a new, 267.
Toxicology, notice of work on, 430.
Tracheotomy with the red-hot knife, 596.
Trachoma, treatment by gonorrheal inoculation, 91.
Transfusion, remarks on, 170, 187, 201, 259, 377, 403, 515.
Trichiasis, treatment of, 29.
Tripoli, the plague in, 672.
Tunnelled urethral instruments, 43, 90.
Turpentine, effects of, on workmen, 610.
Twins, cause of similarity in, 47.
Typhoid fever, treatment of, 546; propagation of, by milk, 572.

U.

Ulcers, treatment of, 234, 259, 575.
Underhill, Dr. A., death of, 46, 71.
University Medical College, commencement, 159.
Ununited fracture, remarks on, 225.
Urethra, calculus in, 510.
Urinary fever, review of work on, 520.
Urine, action of carbolic acid on, 10; in hot countries, 11.
Uterine inflammation, prevention of, 66; tumors, 122.
Uterus, chronic inversion of, 96; absence of, 321; subinvolution, 397; rudimentary, 423.

V.

Vaccination, preventive power of, 329.
Vaccinators, new corps of, 540.
Vagina, fatal result of injection into, 260, 653; subinvolution of, 397.
Vaginitis, tampons of coal-tar in, 372.
Van Buren, Dr. P., death of, 71.
Van Buren, Dr. W. H., tunnelled urethral instruments, 43; review of work by, 632.
Van Wyck, Dr. R. C., Red Sulphur Springs of Va., 5.
Varices, treatment of, by perchloride of iron, 402.
Varicocele, treatment of, 260, 459.
Varicose veins, external treatment of, 347.
Venesection, remarks on, 352.
Veratrum viride, therapeutical value of, in puerperal and other spasmodic diseases, 151.
Vertebræ, dislocation of sixth and seventh, 145.
Vesical calculi per urethram, 242.
Vivisections, remarks on, 518, 542, 550, 574, 661, 664.
Vocal cords, fibroid growths on, 57.
Vomiting, treatment of, 400, 539; of pregnancy, 549.

W.

Wales, Dr. Philip S., traumatic tetanus, 536.
War, Medical and Surgical history of, 70.
Ward, Dr. S. B., on perityphlitis, 570.
Warner, Dr. L. C., improved posterior nares syringe, 247.
Warts and cancer, relations between, 48.
Water, use of warm, in surgery, 249; allowance of, to rachitic children, 401.
Waterman, Dr. S., spectroscope, 529.
Waxy degeneration and capital operations, 368.
Weir, Dr. R. F., Esmarch's operations, 59, 257; perforation of appendix vermiformis, 579.
Whitall, Dr. S., perityphlitis, 255.
Whooping-cough, treatment of, 40, 577; death from, 847.
Williams, Dr. M. W., death of, 71.
Williamson, Dr. J., on medical examiners, 385.
Wines, artificial coloring of red, 483.
Winslow, Dr. F., death of, 157.
Wire speculum, a new, 45.
Wood, Dr. H. C., Jr., notice of work by, 632.
Wood, Dr. James R., Esmarch's method, 656.
Woodward, Dr. J. J., on microscopic slides, 381.
Wright, Dr. F. Markoe, death of, 271.

Y.

Yellow fever, transmission of, 95.

Z.

Ziemssen, Dr. von, review of work by, 491.

THE MEDICAL RECORD.

A Semi-Monthly Journal of Medicine and Surgery.

VOL. IX.] NEW YORK, JANUARY 1, 1874. [No. 1.

Original Lectures.

ON VARIOUS FORMS OF DISEASE OF THE ŒSOPHAGUS.

THE ABSTRACT OF A LECTURE DELIVERED BY

MORELL MACKENZIE, M.D., LONDON.

PHYSICIAN TO THE HOSPITAL FOR DISEASES OF THE THROAT, SENIOR ASSISTANT PHYSICIAN TO THE LONDON HOSPITAL, ETC., AT THE LONDON HOSPITAL, JULY 25, 1873.

(Reported specially for THE MEDICAL RECORD,)

BY BEVERLEY ROBINSON, M.D.

(UNIV. OF PARIS), PHYSICIAN TO THE NEW YORK DISPENSARY, ETC.

IF we refer to our classical authors, such as Reynolds and Aitken, we find little on the subject which shall form the substance of our lecture. In some works on medicine, diseases of the œsophagus are not even mentioned. This is attributable to the fact that morbid affections of this organ are rare. They are not caused by cold or chill. In point of fact, there is no such affection as catarrh of the œsophagus.

The peculiarity of the œsophagus is its epithelium, which is extremely thick, and its mucous membrane—less vascular than any other of the economy. This explains why it is less prone to disease.

Malignant disease of the œsophagus occurs late in life. It is extremely rare under 30 years of age, and we encounter it most frequently between the ages of 50 and 65.

Nine-tenths of the cases of malignant disease of the œsophagus are of the nature of epithelioma. Scirrhus is exceptionally met with.

But little pain may be present, even where there is serious lesion. This depends upon the depth of the epithelial covering and the diminished supply of blood (already noted) in the mucous coat. In all cases of this kind, we have abundant frothy expectoration, and when this does not exist, we can give a more favorable prognosis, even though the stricture be evident, as it is then more than probably due to other than a carcinomatous affection. Syphilitic ulceration of the œsophagus is often confounded with malignant disease.

Iodide of potash should be the touchstone by which the accuracy of our diagnosis is rendered apparent; for if the patient be suffering from a manifestation of the syphilitic diathesis, a rapid cure is frequently produced by its administration.

The anatomical relations of the œsophagus are as follows: It begins on a level with the fifth cervical vertebra, is directed in its downward course from this point, at first towards the left, then to the right, and, arrived at the ninth dorsal vertebra, enters the stomach. In the bougies now employed by us for sounding this passage, the stem is made of whalebone, terminated at one extremity by an ivory ball or bulb of oval shape. These bulbs are graduated of different sizes, and are all perforated in a similar manner, so as to allow of their being screwed on or off the same stem, according to the particular size which is required.

The ordinary gutta-percha bougie is objectionable, because it cracks readily with the different changes of the ambient atmospheric medium. Besides, with this latter bougie we are liable to employ more force than we should, as it is not so elastic and yielding as the one made of whalebone.

Before passing a bougie in the œsophagus, it is customary to smear it with oil. This is unnecessary, as water amply suffices to render its passage easy and painless. It is important, in order to avoid *certainly* a false passage, to keep the bougie in the middle line of the throat, during the time of its introduction. This may readily be accomplished by placing the index-finger of the left hand at the posterior wall of the pharynx, and using it as a guide for the bougie. At the same time a steady and gentle pressure must be exercised, and the operation is frequently rendered relatively simple.

The auscultation of the œsophagus is comparatively a *nouveauté*, and was proposed for the first time by Hamburger, a German. In listening with the stethoscope, we must pay attention to the curves made by the œsophagus, and this instrument is to be applied especially to the left side of the vertebral column. The ordinary deglutition sound is that of a spindle-shaped body being caught by a ring. We can almost always detect this sound when a liquid is swallowed by a healthy patient. In the dorsal region, about the middle of the scapula, we hear the spindle-shaped sound or click with greatest intensity. In cases where, instead of the sound of a gliding body, we hear simple gurgling, it is a proof that the patient has a long and extensive stricture and considerable thickening of the lining membrane of the œsophagus. The gurgling sound is more feeble below the stricture than on a level with it. It is injurious for patients suffering from disease of the œsophagus to take stimulants, or anything in the way of nutriment which is of an irritating nature. Meat and bread should be strictly forbidden. We may and ought, however, to give plenty of milk and sufficient quantities of mild, invigorating substances, such as arrow-root or soft-boiled eggs. In malignant disease little can be done beyond the dietary measures indicated, and the use of certain palliative drugs. Benefit is often derived from the exhibition of small doses of opiates. Gastrotomy in these cases has never been successful, and the operation has been abandoned by the surgeons who were at one time advocates of it.

After syphilitic ulceration we have contraction, and we frequently get good results by passing bougies. In using them there is always some attendant risk, however, and in attempts made, the end of the instrument may find its way across the walls of the œsophagus into the posterior mediastinum. Considering this possibility, and too fearful of its occurrence, some practitioners decline to employ bougies at all. Mackenzie advises *not* to pass bougies when there is ulcera-

tion, inasmuch as fear of a false passage is then legitimate, and we cannot in this way render any possible service. Besides, if an accident to the patient should occur, much useless discredit is brought upon the attending physician; as in those cases on record where death was the unhappy consequence within 24 hours after a too daring effort to conquer an obstacle. In those cases where the œsophagus is *contracted* and *ulcerated*, the diagnosis is generally rendered certain by a frothy expectoration. At times it may be advantageous to make use of the conical or tapered bougie. If, however, any obstruction is encountered, the bougie must be withdrawn immediately, and under no circumstances must we endeavor to overcome it. even by a moderate exertion of force. As a rule, it is more prudent to pass only one bougie at a sitting, and more than one case might be cited where the non-observance of this law has too manifestly resulted in the production of a false passage.

Cases of paralysis of the œsophagus are occasionally met with, and more particularly amongst quite old people. This paralysis consists essentially in a loss of power in the constrictor muscles. The patients suffering from this disease generally enjoy tolerably good health in other respects. They experience most difficulty in swallowing solids. This trouble of function is readily explained by our knowledge of physiology, *i.e.*, deglutition is not a simple mechanical act, it is something more, and in order that it may be properly performed, the muscles of the pharynx must contract and seize the alimentary bolus. In the cases under consideration, great benefit is derived from faradization of the inactive muscles, and happily their normal action is oftentimes restored in part. Unfortunately, however, relapses are frequent, and after a time the disease may and does recur in a form as exaggerated as when the electrical treatment was first experimented.

In hysterical patients we have what is known as hysterical and spasmodical dysphagia.

The treatment here consists in general constitutional measures. At the same time the patient must be subjected to moral influences, and special care should be taken, so that attention may not be directed, at least visibly, to their real disease. Apparent disease of the œsophagus is often caused by the pressure of a tumor situated in the anterior mediastinum. The lymphatic glands, increased in size, may also press upon the œsophagus and push it to one side. We then find with the stethoscope a difference of position in the gurgling sound. By compression of one of the recurrent nerves, difficulty of swallowing is produced. This symptom frequently occurs in patients who have difficulty in approaching the vocal cords.

During deglutition, as we are aware, the vocal cords should normally approximate; and if they do not, liquids often pass into the larynx and cause cough and transient symptoms of asphyxia.

15 West 26th St.

Maryland Epidemiological Society.—At the last monthly meeting of this society Professor Nathan R. Smith was unanimously elected a member. The officers nominated by the Executive Committee for the ensuing year were: For Honorary President, Prof. Nathan R. Smith; President, Dr. James A. Stewart (Health Commissioner); Vice-President, Dr. George W. Benson; Recording Secretary, Dr. A. H. Saxton; Treasurer, Dr. Thomas B. Evans; Executive Committee, Dr. J. J. Caldwell, Dr. J. Harvey Hill, and Dr. J. E. Atkinson.

Original Communications.

THE TREATMENT OF JOINT-AFFECTIONS BY MASSAGE.

ARRANGED BY

WM. R. FISHER, M.D.,

AFTER ORAL TRANSLATIONS FROM THE DANISH,

By GEO. R. CUTTER, M.D.

My friend Dr. Geo. R. Cutter has had the kindness to give me an oral translation of a series of six papers (seventy-one pages) relating to the treatment of various forms of disease by massage, which have appeared within the last twelve months in the *Norsk Magazin for Lægevidenskaben*; and, from notes which were taken by me during the reading of these articles, I have prepared the following abstract of the views which are expressed in three of them, upon the treatment by massage of a single class of diseases: namely, those of the joints. In making the selections I have intentionally excluded all matters which are extraneous to this topic; but, at the same time, I have endeavored to avoid the omission of anything that is essential to a clear statement and a correct understanding of the subject, and I have taken special care to follow the arrangement of the original, as far as possible, and to adhere to the technical nomenclature of the authors.

The word massage (Arab. mass: Gr. μάσσω: to knead) has been adopted by these Danish writers from the French, and signifies the use of such passive manipulations as rubbing, kneading, percussing, and rolling of the soft parts. Some of the authors extend its meaning so as to include passive movements of the joints; while others restrict it to manipulations which can be given with the fingers, and use the term effleurage to designate hand-rubbing. With such refinements, however, we have nothing to do at present. The reader may understand the word massage, whenever it occurs in this paper, to mean passive manipulations with the fingers or hands; when movements of the joints are spoken of, the term passive movement will be employed.

The attention of the profession in Denmark has been especially directed towards the subject of massage by the wide-spreading reputation of Dr. Mezger, a Dutch physician now practising at Bonn, who has recently achieved an increased celebrity by a successful employment of this means in the treatment of the Danish Crown-Prince. The above mentioned papers all relate to Mezger's method, as it is called; and since the reputation of this physician is chiefly dependent upon his success in the treatment of joint-affections (although he extends his method to a variety of other complaints), this abstract is confined to the consideration of that class of diseases. It should be borne in mind that the American method of treating joint inflammations by extension and counter-extension, without preventing locomotion, is rarely used anywhere in Europe, and in Denmark and the Scandinavian countries has probably scarcely been heard of; so that the objections which are hereafter, in the course of this paper, to be made against "the usual methods of treatment," should be understood to refer, for the most part, to the use of counter-irritants and the plaster of-Paris bandage.

It is not likely that many will be willing to accept in full the favorable opinions which some of the Dan-

ish physicians express with reference to an exclusive treatment of diseases of the joints by manipulations and movements; yet some may find, in the arguments which are brought forward in support of the mechanical method, and in the illustrations of its practical effects, sufficient evidence to awaken an inquiry into the advisability of diminishing, to some extent at least, that exclusive use of retentive apparatus, to prevent all motion between the joint-surfaces, which is now too common. A conservatism, which depends in great measure upon the force of habit and the weight of foreign authorities, still keeps too many of our own surgeons from practically recognizing, in the treatment of joint-affections, the importance of securing *moderate motion with adequate protection against injury*—a therapeutic principle which American orthopædists have the honor to have discovered and elaborated.

The theoretical basis for a treatment of joint-diseases, and especially of synovitis, by massage, is well stated in a paper by Candidate of Medicine, F. Kiær (*Norsk Mag. for Læg.*, 3d ser., 3d vol., No. 4). He begins by quoting Hueter's remarks, to the effect that diseases of the articulations often end in death; sometimes in incomplete recovery; very seldom in perfect cure; and that attention should be directed towards the improvement of our means of treating, not only the primary attacks, but especially the effects of these diseases. He then proceeds to introduce the subject of the treatment of affections of the joints by massage, on the ground that it behooves us to try thoroughly every new method which promises in any way to reduce the above-mentioned deplorable results. Massage, however, is not properly speaking a new remedy, for it has been made use of from time immemorial in various nations and in all ages; but he claims that, as a special means of treatment, it may now be ranked much higher among the list of therapeutic agents than has hitherto been possible; and to Dr. Mezger he accords special credit for having been prominent in the development of its curative powers, and in its elevation in the estimation of the profession.

Dr. Mezger employs massage in treating both acute and chronic synovitis in the articulations of the extremities. In the case of the hip-joint, however, he does not use it; partly on account of the deep situation and anatomical relations of this articulation, and partly from the fact that its inflammations often depend upon primary osteitis. He divides his frictions into two classes: the first, passing from side to side (horizontal frictions); the second, passing from below upwards in the line of the limb (vertical frictions). The applications vary in force according to the effect which he desires to produce, and are made, not only upon the joint itself, but also upon the adjacent unaffected tissues. By means of the horizontal frictions the skin is moved about over the fasciæ and ligaments, and the superficial vessels are acted upon, partly by the direct application of mechanical force, and partly by the indirect influence of the vaso-motor nerves. The circulation of the blood is thereby increased; and where there is a tendency to venous stagnation, the bluish color is removed, and the skin assumes its natural appearance. The vertical frictions are made in the direction of the circulation of fluid in the venous and lymphatic vessels, and promote the flow within them. By a combination of these two methods of manipulation—the one stimulating the action, and the other propelling the contents of the blood-vessels and lymphatics—absorption is necessarily increased. Still further, when there are deposits or effusions of blood in the soft parts, the use of frictions may bring about slight changes in their position, and tend to disperse them, by breaking them up and rendering them more readily absorbable. Massage, therefore, is a powerful agent in producing the absorption of effused materials; acting both by preparing them for removal, and also by promoting the proper function of the lymphatic vessels. It is true that moderate compression will likewise promote absorption by the lymphatics. But compression acts upon the subcutaneous veins, and gives rise to œdema of the parts below the point of its application; whereas, by the use of massage, not only is there no obstruction offered to the venous flow, but, on the contrary, the circulation is greatly promoted. For these reasons massage can be used with great confidence in the treatment of synovitis.

In acute and chronic synovitis serosa the vertical frictions are more applicable than the horizontal. In addition to the effusion within the membrane of the joint, we have to deal with an infiltration and hyperæmia of the synovial and peri-synovial tissues. The vascular network which surrounds the joint is dilated, and the circulation in the blood and lymphatic vessels is correspondingly sluggish. By the use of massage, as we have seen, the absorption of the effusion can be hastened, and the retarded circulation rendered free, or, in other words, the disease can be cured; while, at the same time, a moderate use of the affected joint is not denied to the patient.

According to Mezger, the average time which is required for the treatment of an acute synovitis by his method is two weeks, and for a chronic case six weeks. Candidate Kiær does not think that a simple hydrarthrosis can be cured any more rapidly by rest, position, and counter-irritation than by massage, but is of the opinion that a cure by the former methods is much more likely to be followed by a relapse than where the mechanical treatment has been resorted to. As to the cost of the latter, an objection which many have raised against it, he argues that, since it does not compel a patient to give up his occupation during its employment, it may, in many instances, be more economical than the plans of treatment which are in more common use.

The hyperplastic forms of synovitis require a somewhat more complicated treatment. [The author, in a foot-note, excludes from consideration all cases which have advanced to suppuration.] Both the horizontal and the vertical frictions are to be employed, and usually strong pressure is required, especially over those points where the peri-synovial tissue is felt to be much thickened. The more acute the inflammatory process, the softer should be the pressure, as a general rule; because, if it be made too roughly, it might excite inflammation and pain, and also because forcible pressure is not necessary for the removal of the disease. This rule holds good likewise when a chronic synovitis takes on itself the subacute condition.

Synovitis hyperplastica presents a hyperplasia of the areolar tissue in the synovial membrane and the peri-synovial tissues, together with a more or less plentiful serous exudation. At the same time there is a development, in greater or less abundance, of newly formed vessels, and perhaps also of new formations in the system of canals from which the lymphatics take their origin. The combined use of both varieties of frictions in such cases produces in the first place an effect upon the peri-articular tissues, and diminishes the tumefaction which there exists. Not infrequently this alone is sufficient to cause the subsidence of the inflammatory process in the synovial membrane, and the disease is cured. But usually a more protracted

course of treatment is necessary. The skin begins to assume its natural hue; the dilated veins, which have been showing themselves through it, disappear from sight; and, first in one spot, then in several, and finally over the whole surface, the swelling subsides, and the peri-synovial tissues are felt to be restored to their normal state, although occasionally still remaining somewhat thickened. This restoration shows itself at different points with varying rapidity. In the knee, for example, the infiltrated tissues over the external alar ligament are the slowest to recover.

The process of cure very likely takes the following course: The serous effusion is first absorbed, after the manner that has previously been described. The newly formed areolar tissue becomes cicatricial, thickening the peri-synovial tissues and the synovial membrane, and, by its contraction, diminishing the calibre (*lumen*) of the newly formed vessels, so that their walls contract and atrophy. The dilated vessels, under the manipulations, become more or less completely emptied, and their walls are thus enabled to contract by their own elasticity. At first, however, they dilate again between the applications of the treatment, but gradually they more and more regain their proper tonicity. Still further, by means of the stronger frictions, the thinner vessels are ruptured, and blood is effused into the cellular tissue, where it is absorbed; and then the ruptured vessels atrophy. In synovitis granulosa such extravasations often occur during a treatment by massage; but when care is exercised to prevent the effusion of blood from becoming excessive, no bad results ever follow.

In synovitis pannosa, as is well known, the cartilages of the joint present a vascular development whose vessels chiefly originate from, and stand in connection with, the newly formed vessels in that portion of the articular tissues which is transitional between the synovial membrane and the joint-surfaces. If we can cause the last-named vessels to atrophy, we may reasonably expect the vessels on the joint-surfaces, with which they are directly connected, to atrophy also; and therefore, in employing massage in such cases of joint-disease, it is of importance to direct a special attention to those portions of the tissue which pass across from one joint-surface to the other. Atrophy of the pannous tissue can still further be promoted in another way; namely, by active and passive movements of the joint. In the fœtal state a physiological pannus is developed at those points where, during the condition of rest, the joint-surfaces do not come in contact. The same cause partly determines the existence of a pathological pannus, which also is chiefly developed on those parts of the synovial surface which, on account of a forced condition of rest, do not come in contact. By motion, on the other hand, these pannous surfaces will come together, and their newly formed vessels will be forced to atrophy. Furthermore, every synovial membrane which has been the seat of a hyperplastic inflammation has a tendency, during its process of recovery, towards contraction (*indskrumpning*). The stiffness of the joint, which is a result of this, may be best counteracted by a timely use of movements. These also promote the circulation of the blood and lymph, and are active agents against that form of muscular atrophy which, as a rule, is present in joint-affections of long standing.

Dr. Mezger recommends to his patients, both in acute and chronic cases, a moderate use of the affected joint, to an extent which is limited by the production of pain. Passive movements are also used by him at the same time. He has treated several hundred cases, during the past fourteen years, by his peculiar system, and in no instance has he seen bad results follow upon the moderate use of movements. He is of opinion that many cases pass into the suppurative stage on account of the absolute rest which is enforced by the forms of treatment which are in common use; and those instances of suppuration which have developed while under his own treatment, he thinks would have suffered in the same way, even though manipulation and movements had not been employed.

According to the views of Candidate Kiær, Dr. Mezger's chief merit consists in the fact that he has separated massage from the system of therapeutic gymnastics, of which it forms a part, and that he has studied its effects upon disease more thoroughly and completely than has ever been, or could have been, done while it remained in the position of an accessory to other treatment. Mezger has elevated massage to the dignity of chief therapeutic means in his treatment of joint-affections, and passive movements assume with him a secondary importance. Mr. Kiær thinks that no one who has practically observed the effects of his treatment will be disposed to deny that his system of manipulations constitutes one of the most powerful remedies for combating synovitis—acute, chronic, serous, and hyperplastic.

At a meeting of the Medical Society of Copenhagen on the 25th of September, 1872, Dr. P. Winge made some practical remarks upon Mezger's method of treating various forms of disease by massage, which he had personally examined during a visit of three weeks' duration at Bonn. (*Norsk Mag. for Læg.*, 3d Ser., 2d Vol., No. 11.) He describes it briefly as consisting essentially in kneading, rolling, percussing, and rubbing the parts which are the subjects for treatment. Whenever these are hairy, Dr. Mezger has them shaved before commencing his treatment, for when this is omitted the manipulations are apt to excite an inflammation about the roots of the hairs, and must be suspended until it subsides. The operator sits in front of his patient on a low stool, and begins by oiling the part with perfumed lard. He rubs strongly whenever indurations, infiltrations, or effusions are to be dealt with, and follows from below upwards the course of the lymphatic vessels in the extremities. When the knee-joint is the subject of treatment, he works across the joint with the fingers of one hand, on both sides, below the patella, pressing inwards with more or less force; while the fingers of the other hand work in the same manner, upwards along both sides of the patella, over the capsular ligament, or any ligament which is felt to be swollen. This process is continued from three to five minutes. He then grasps the joint with his right hand, and, pressing firmly, rubs upwards over the patella, as high as the superior insertion of the investing ligaments. This is repeated a number of times, varying according to the circumstances of the case. The applications are repeated once or twice every day. As the method of procedure is the same in principle for the other joints (the hip-joint, as we have already seen, being seldom treated by massage), this single example will suffice.

Passing over Dr. Winge's explanation of the theory of the mode of action of massage in synovitis, which is essentially the same as that which has been much better expressed by Candidate Kiær, I will give a few of the cases which he reports as having been treated by Dr. Mezger under his own observation. It is to be regretted that his visit continued only three weeks, for he was unable to follow up the ultimate results in any case.

Case I.—A merchant, aged sixty-two, twenty years ago had a synovitis of the left knee, which subsided

under rest and other treatment, and left him well. Ten years ago he injured the same joint by being thrown from a wagon. A large effusion resulted, which was absorbed after a time, but was followed by several relapses, and the patient walked with difficulty and uncertainty, being very liable to falls. Mezger diagnosticated a chronic synovitis levis, pannosa, and treated him three times a day by massage. Dr. Winge saw fifty applications made, and reports that the improvement, up to the time of his departure from Bonn, was very decided.

CASE II.—A gentleman, aged forty-five, had had disease of the left hip-joint when he was five years of age. Twenty years ago was attacked with an inflammation of the left knee, and received treatment for a year, recovering with a stiff joint, and a subluxation backwards of the leg on the thigh. Five and a half years ago he had another attack of inflammation in the knee, attended with pain and loss of power of locomotion. He came to Mezger on crutches. A diagnosis was made of synovitis chronica, hyperplastica, levis, cum ankylose. After eight days of treatment by massage, the patient could walk with the aid of a cane. The ankylosis and the posterior subluxation were of course unaltered, but the inflammation was removed.

In treating synovitis of the ankle-joint, which is complicated with flat-foot (talipes valgus), Dr. Mezger either treats both conditions at once, or waits until he has improved the position of the foot before he proceeds to treat the joint-inflammation. To accomplish the latter he arranges the shoe so that the inside of the foot is well supported, and brings the heel forward under the plantar arch.

In chronic rheumatic inflammations of the joints, accompanied by stiffness and contractures, Mezger gives a tolerably good prognosis when the soft parts alone are involved; but when the bony and cartilaginous tissues are invaded, his prognosis is decidedly unfavorable. He never uses chloroform in treating such cases, because he does not employ very forcible manipulations and movements. He often ruptures pseudo-membranous formations; but he carefully avoids exciting an inflammatory reaction, which might result in the production of stronger adhesions than before existed, and thus render his treatment more harmful than beneficial. Rheumatic distortions of the fingers, when treated by his method, are sometimes very painful: the wrist-joint is less so. The ankle-joint is apt to be more painful under treatment than the knee, but much less than the fingers and wrist.

CASE III.—A gentleman, aged fifty-eight, had suffered from rheumatism for a long time, and for the past year had had a persistent swelling and infiltration in the fingers and wrists; the thumbs not being involved. When he came to Dr. Mezger he was so helpless that he could neither open a door nor dress himself. He was treated at first by massage, and then by flexion and extension of the stiffened joints, for the purpose of rupturing the pseudo-membranes. In the three weeks that he remained under Dr. Winge's observation he improved so much that he could flex his wrists very well, and could write his name; but the fingers still remained quite stiff.

CASE IV.—An officer, aged thirty, with an inherited tendency to gout and rheumatism, was attacked with a rheumatic inflammation in both ankle-joints during the Austrian war in 1866. He recovered under the treatment which he received at that time. In 1870 he took part in the French war, and again was attacked with rheumatism of the ankle-joints. When he came to Dr. Mezger he could scarcely walk, and there was a good deal of infiltration present, especially about the malleoli. His ankles were at first submitted to massage, and then flexed, extended and rotated, to rupture the pseudo-membranes. His improvement was very rapid: after two weeks of treatment he went home well.

CASE V. is that of a young Hollander who sprained his ankle severely a few days before coming to Dr. Mezger. He complained of great pain on pressure, or on attempting to use the joint, and there were large ecchymoses beneath the skin about the ankle. Massage was commenced at once, notwithstanding the pain which it excited in the beginning, and after six applications (three days) the patient was entirely well, and able to jump down from a sofa to the floor without causing himself the slightest pain.

After describing these and similar examples of the good effects of Dr. Mezger's method in joint-affections, Dr. Winge went on to give an account of his treatment, by the same means, of various other conditions, such as muscular atrophy, neuralgia, mastitis, chronic ulcers, etc. These do not now concern us, and we will follow him no further, but turn to a paper by Professor Nicolaysen in opposition to Mezger's system of treating joint-diseases (*Norsk Mag. for Læg.*, 3d Ser., 3d Vol., No. 1). The professor denies that Mezger has the right to claim the credit of having developed a new method of treatment, since massage, as he understands it, is merely a form of manipulation which has been and is used in many other parts of the world; and he gives a historical survey in support of his statement. He admits that massage is of great value in the treatment of sprains; but in inflammations of the joints he would restrict its employment entirely to the after-effects of disease; laying down the rule that all inflammation must have subsided before manipulations or movements can be at all permissible. This extreme conservatism, on the other hand, has been attacked by the Danish supporters of Mezger's system, on the grounds that it is partly based upon theoretical objections, and partly on Nicolaysen's omission to carry out, in the treatment of joint-diseases by massage, the rules of procedure which Dr. Mezger has laid down as essential to success.

THE WATER OF THE RED SULPHUR SPRINGS IN THE TREATMENT OF DISEASES OF THE HEART AND LUNGS.

BY R. C. VAN WYCK, M.D.,

CULPEPPER CO., VA.

I WISH to call the attention of the profession to a mineral water which has been known and distinguished for the past sixty years, though doubtless known to the *medical profession* at the North,—yet the virtues of which have been but little credited, or, if so, have erroneously been considered or forgotten.

These waters have been long resorted to by invalids suffering from pulmonary and throat diseases principally, though they are equally efficacious in other subacute affections.

The water of the Red Sulphur Springs takes its name from a peculiar deposit of a beautiful lake-color adhering to the sides of the marble slabs, wood, etc.; and is found to be a precipitate of sulphur, ferrous salts, and the vegetable matter of the "*red lichen*" deposited by alluvial process in the neighboring soil. This water, says Prof. Augustus A. Hays, M.D., of Roxbury, Mass., who has subjected it to a rigid chemical analysis, is perfectly colorless and transparent;

when agitated, has an agreeable sparkling appearance. Its odor is that of hydro-sulphuric acid mixed with earth or clay, the latter being retained after the hydro-sulphuric acid is dissipated or destroyed. In taste it is hepatic, cooling, and invigorating. By ebullition it does not immediately become turbid, gases escape, and when reduced in volume by evaporation, deposition takes place. The specific gravity of this water, compared with pure water at the same temperature and pressure, equals 1.00029. Its temperature is 54° F.

Chemical Analysis.—Fifty thousand grains (about seven pints) of the water, from which the hydro-sulphuric acid had been removed, afforded by the usual processes 2698 grains measure of gases, or one volume of gases from 18¼ volumes of the water.

Ten parts of the mixed gases are made up of—

Carbonic acid gas	4.19
Nitrogen gas	4.77
Oxygen gas	1.04
	10.00

A well-sealed bottle containing the hydro-sulphuric acid gas in the water, afforded for 50 parts of water 3.088 of mixed gases, or one volume of gases from less than 17 volumes of water.

Consisting of—

Carbonic acid gas	1.245
Nitrogen gas	1.497
Oxygen gas	.260
Hydro-sulphuric acid gas	.086
	3.088

Gaseous contents of a gallon, or 231 cubic inches:

Carbonic acid	5.750
Nitrogen	6.916
Oxygen	1.201
Hydro-sulphuric acid	0.397
	14.266

Fifty thousand grains (about seven pints) of the water afforded by evaporation in the air at 240° F. a light yellowish-brown matter, which, after it had been carefully dried, weighed 20.56 grains. At the temperature of 240° F. this residue becomes changed, and suffers a loss of weight, being reduced to 17.55 grains. This residue contains the saline particles of the water, and is composed of—

Silicious earthy matter, containing traces of oxide of iron and ammonia, probably suspended merely	0.70
Sulphate of soda in a dry state (which forms with the water 802 grains)	3.55
Sulphate of lime	0.47
Carbonate of lime (lime dissolved in carbonic acid)	4.50
Carbonate of magnesia, forming fluid magnesia	4.13
A peculiar substance containing sulphur combined with organic matter (the "sulphur compound")	0.27
	20.55

The "*sulphur compound*," says Dr. Hays, which forms a part of the saline contents of this water, has never been described, if it has ever been met with. While in its natural state, and out of contact with atmospheric air, it is dissolved in the water, and forms a permanent solution. Air, acids, and other agents separate it from the water in the form of a jelly, and alkaline carbonates, alkalies, water, and other agents re-dissolve it. It has no acid action on test fluids, but bears that character with bases, and forms compounds analogous to salts. In its decomposition, ammonia is formed, and hydro-sulphuric acid is liberated; or if heat be employed in the experiment, sulphur is separated. It combines with the oxide of silver, and forms a salt of a reddish-purple color, in the form of flocculent precipitate, which dissolves in pure water; with the oxide of lead, a yellowish-white powder; and with the oxide of copper, a pale-blue salt in fine powder. In these compounds it remains unaltered, and may be separated from them and transferred to other bases.

Mixed with a small quantity of water, and exposed to the temperature of 80° F., it decomposes, and emits a most offensive odor of putrefying matter with hydro-sulphuric acid gas. It is to this property that the hydro-sulphuric acid gas in the water is due, and to the oxidation of a part of this compound most of the sulphuric acid found in the compound may be referred.

There are traces of chlorine in some specimens, but at most only 0.13 grs. of chloride of silver could be separated from 10,000 grs. of water; this substance being rarely absent from natural waters that have penetrated the earth. This substance (sulphur compound) was thought to be analogous with *barégine* and *glairine* of the Eaux-Bonnes and Cauterets in the Pyrenees, but Dr. Hays thinks it is a substance new and peculiar, and seems to be an azotized base, and so combined as to neutralize the distinctive characters of sulphur. The hydro-sulphuric acid gas found in the water is produced through the agency of this body; either by its action on the sulphates present, or more probably the substance disengages hydro-sulphuric acid before reaching the surface of the earth, abstracting oxygen from air already dissolved in the water. It is in favor of this view that less oxygen is in this than in common water. I believe no trace of uncombined sulphur can be found in it in its fresh state; and when I fermented it, "*hydro-sulphuric acid*" was the form it appeared in. All the sulphur in this compound is therefore fitted to be absorbed in the animal system—an important medical fact; and it is therefore more than probable that the sulphur compound in this water is the principal medicinal agent contained in it, although its action in combination with other constituents may be necessary to produce the effects for which this water is so justly celebrated.*

Its action.—The action of this water when taken into the system is cathartic, narcotic, diuretic, diaphoretic, sedative, alterative, and tonic.

The most marked effect of this water is a reduction of the pulse. It has been known to diminish it from 10 to 20 pulsations in 24 hours. In my own case, on the evening of my arrival, it was 89; the next morning it was 69. Its action in this respect resembles digitalis. It increases the volume, and diminishes the pulsations. Its sedative action is most marked in moderately small doses, say four to six glasses per diem. In larger doses it acts like the infusion of digitalis as a diuretic. In small doses of two to three glasses per diem it acts as a cathartic, producing very often full and even copious evacuations. This is most always observable at first on commencing the use of the water, but the cathartic effect soon subsides: and if not, can be easily controlled by exercise, warm baths, or small doses of opium. In larger doses, from twelve to thirteen glasses per diem, it produces free diuresis and constipation. The latter symptom may easily be obviated by using a teaspoonful of table-salt in a glass of water before breakfast. It acts

* See Dr. Burk's book, On the Action of the Mineral Waters of Virginia.

freely as a diaphoretic if exercise be freely taken directly after drinking, which modifies very materially the excessive cathartic or diuretic action. Its action as a soporific is decidedly marked; patients that have been unable to sleep for months soon enjoy a calm, refreshing sleep. Its tonic action I believe is by improving the appetite, which is always improved after drinking the waters for a short time, and I may remark is characteristic of all sulphur waters. As an alterative its effects are shown very markedly, especially in phthisical persons, by a more free respiration. Very often the first thing that convinces the consumptive that he is improving, is that he "*breathes easier.*" The expectoration is increased at first, but the patient expectorates more easily, and soon the expectoration becomes thicker, less in quantity, and finally disappears. I can recall one case where the cough entirely disappeared in four weeks from the use of the water. One patient in particular, who was troubled with night sweats for the past six months, was entirely cured in ten days by the faithful use of the water.

The introduction of this water into the system exerts a great influence on the circulation, and consequently on the mucous surfaces that are in a morbid condition; and when we consider that the greater portion of the fluids taken into the stomach are directly conveyed into the circulation by the absorbents, we can at once perceive that the great hygienic power of this water is dependent on the characteristics enumerated, all of which, combined, act as a singular alterative in equalizing an excited circulation, in correcting the highly acrid and vitiated secretions of an irritated mucous membrane, by modifying the fluid that supplies the matter for that secretion; and that by sending to the heart and lungs also a modified supply of blood, it calms these organs by producing in the latter a condition favorable to the proper performance of the functions of oxygenation, and by soothing the irritation of the former, causing it to send forth its stream with a milder impetus; and moreover, by diffusing more equally the capillary circulation, and in return obtaining not only a more moderate, but a more healthy supply.

Having thus briefly considered the action of the water, I will now enumerate the diseases in which I have seen the waters beneficial, and the vast experience of others who have long watched its action. These diseases are: chronic phthisis, chronic laryngitis, chronic bronchitis, subacute pleurisy, pericarditis with effusion, hydrothorax, functional disease of the heart, nervous irritability, hypertrophy of the heart, Bright's disease, cirrhosis associated with ascites.*

This water is contra-indicated in all acute diseases, in plethora or apoplectic tendencies, in chronic diarrhœa and dysentery,† in acute and far advanced phthisis, especially phthisis associated with diarrhœa, and in any acute disease of the heart or lungs. There are two stages of phthisis in which the Red Sulphur water gives prompt and decided relief. One is where the deposit is small and the development slow, associated with occasional hemorrhages. In such cases the water seems to arrest the deposition, to control the night sweats, at the same time to increase the flesh, and impart tone and energy to the system. The second form is when softening has taken place to a limited extent, and inflammation of the contiguous tissues has resulted in purulent expectoration (*i.e.* "*chronic caseous pneumonia, with interstitial deposit*"). The question here to be decided by the family physician is, whether the condition of his patient is such as to admit of a fair probability that he will be able to return to his home in the event of a failure. If diarrhœa alternates with the expectoration and cough in passing through the limestone regions, the bowels frequently give way, and death ensues on the journey. The physician should carefully consider all things, and no patient should attempt such a trip unless he is physically able to endure such accidents, should they occur.

Having enumerated those diseases which experience has proven are best benefited by the waters, I will close this article with a brief consideration of the place, its location, etc.

The Red Sulphur Springs are situated in Monroe Co., West Virginia. They are best reached by taking the Chesapeake and Ohio Railroad to Talcott station, thence by stage thirteen miles to the Springs, or the Virginia & Tennessee Railroad to Dublin station, thence by stage forty miles. They are situated in a valley, surrounded on two sides by lofty mountains. The springs are situated at the south-west portion of the valley, and the water is collected into two marble basins, sheltered by a noble pavilion in the form of a Grecian temple; this structure alone was erected at a cost of $6,000. The buildings are situated at the bases of these mountains,—a most wonderful mistake, as there is ground within three hundred yards adjacent, which is a most delightful site for hotel buildings.

These buildings were erected in 1840, and since the war the place as well as the buildings has been suffered to run down; still, the buildings are comfortable (though somewhat damp), and in a dry season are comfortable enough for all patients. The great drawback to the Springs is the location of the buildings, built at the bases of the mountains, which is quite damp. They are subject to dense fogs every morning, and the sun disappears behind the mountains about 4 o'clock in the afternoon. But in spite of the serious drawbacks, invalids, and consumptives at that, do improve often in the dampest seasons. What is needed is an enterprising stock company to buy the Springs. The lands, including the springs and grounds, are estimated at 1,400 acres, and can be purchased for $25,000. If the buildings were in a suitable place, so that invalids could have the sun continually, where dryness and pure air could be freely enjoyed, which may easily be done, I am satisfied that the Red Sulphur Springs would rank first among curative waters, and would justly bear the name "EXCELSIOR." For when a mineral water is found that will cure or even alleviate pulmonary phthisis, we may all rest assured that it will be a great resort for thousands from far and near. It is not, however, necessary to go to the Springs to get the virtues of the water, as it can be bottled. The writer of this bears testimony to having used it for the past month at home. The water keeps better in cool weather, as heat seems to cause a precipitate. It is very volatile, and does not keep well after being uncorked. When well kept it seems to act just as well as at the Springs.

I have been careful not to overestimate anything in regard to this water. I do not consider it by any means a panacea for consumption, and cases that are

* In these two latter diseases the waters deserve a trial; no cases, to my knowledge, have tried the waters.

† I have thought best to exclude diarrhœa and dysentery from the list, as the Rockbridge alum-water is much more efficacious. Dr. R. Bradford, who practised medicine at the Red Sulphur, says: "The effect of this water in reducing the pulse is one of the numerous, singular, and powerful properties belonging to it. It lessens arterial action to such a degree, that it seldom fails to remove fever, difficulty in breathing, and pain in the chest. When the patient is restricted to the proper regimen, this water may be taken with greater advantage in pulmonary cases than any other remedy I have seen employed for that purpose. It is also an important remedy in enlarged spleen and liver, and in diseases of the mucous membranes generally."

selected for its use require judgment. It does now and then fail in best-selected cases, but it is easy to know this; when the water increases the pulse, produces fever and constriction of the chest, it is not adapted,—those cases seem to be in the proportion of one in fifty.

The water seems to act more efficaciously when active exercise is combined. It is incompatible with stimulants as a rule,—though some patients are benefited by the combination. Vegetables are, as a rule, incompatible. The most agreeable and nutritious way of drinking the water is with cream and milk, and I do not find it incompatible with cod-liver oil, which is my daily medicine—Red-Sulphur water, cream, milk, and cod-liver oil. In conclusion, I will truthfully state, that having been an invalid for the past four years, having sought many climes, including boasting Colorado, I have never, since my illness, enjoyed better health since the five weeks spent at the Red Sulphur Springs, and four months on a farm in the glorious Piedmont valley of Virginia.

AN ABORTIVE METHOD OF TREATMENT IN CERTAIN CASES OF CORYZA AND ACUTE INFLAMMATION OF THE FRONTAL SINUSES.

By J. S. PROUT, M.D.,

OF BROOKLYN, N. Y.

I will say nothing of the symptoms of coryza, as probably all of my readers have had one or more attacks; but will remark that, in my own experience, the characteristic symptoms of frontal catarrh, as I call the inflammation of the frontal sinuses, are a dull, heavy frontal ache, not to be accounted for by the coexistence of gastric disturbance or *biliousness*, and a very painful feeling of distention in the frontal region in stooping forward.

The treatment is unsatisfactory to a high degree. Niemeyer, in his Text-Book of Practical Medicine (Translation, Vol. I., p. 291), says: "Various abortive methods of treatment for acute nasal catarrh have been proposed; but none of them" (he mentions six) "have obtained general approval." Among other things he recommends the Russian bath.

Cohen, in his excellent work on the Diseases of the Throat, mentions various remedies that may be tried. He speaks of three, any one of which will generally cause a coryza to abort: 1st, a grain or so of opium; 2d, a dose of alcohol at bed-time; or 3d, the inhalation of chloroform.

We may try these means on ourselves, if we choose—but for obvious reasons we cannot trust our patients with them.

We need a remedy that is safe, easy to use, that we can put in the hands of our patients without fear of unfortunate results, and that does not waste our time; a remedy that physicians in their own persons, as well as the laity, will not consider worse than the disease itself.

Let me, then, without further introduction, state that I have, in my own person, and with patients, often been able to arrest the disease in the course of an hour or less, by taking or giving large doses of the officinal tincture of the chloride of iron, 20 or 30 minims, as soon as possible after the cold is "caught." I generally find that in about half an hour there is a decided amelioration of the symptoms, which may be permanent, in which case I take or give no more of the tincture, or the improvement may pass off in two or three hours; in which case, the dose must be repeated. This may be required three or four times.

I have had numerous attacks of frontal catarrh, which I have thus caused to abort. I have had the same good fortune with coryzas accompanied by sore-throat.

In other cases, perhaps on account of greater severity or from delay in commencing the treatment, I have not obtained permanent benefit from the use of the tincture. In my hands, therefore, it is not a specific.

On the 21st October of this year, I called the attention of the members of our County Medical Society to this method of treating coryzas. I have recently received a note from a member of the Society, Dr. Edson, who was present at the meeting referred to, giving his experience in regard to it, which is so entirely satisfactory and in accord with my own, that I prefer to copy it, as the record of an unprejudiced observer, rather than detail any of my own observations, which might appear unduly partial.

He writes (Nov. 28th):—

"Mr. B., a lawyer, has for years been particularly subject to colds, with frontal headache, difficulty in respiration, and the other usual attending symptoms. He usually spoke of himself as being a sufferer from catarrh. During the months of August and September his affection generally assumed a severer form, not very unlike hay-asthma.

"Upon returning home on the evening on which you spoke before the Medical Society of the successful use of the muriated tincture of iron in similar cases, I found Mr. B. in the early stage of one of his attacks, 'sneezing and wheezing,' with creeping chills, eyes suffused, etc., etc., presenting that peculiarly disconsolate appearance so general in this complaint. I suggested to him to try the tincture in half-drachm doses, repeated if necessary. In less than half an hour after taking the first dose he expressed himself as feeling decided relief. Another dose in due time, and his attack was cut short, decidedly aborted. Since that time, whenever he feels the hand of his old enemy upon him, he takes a timely dose of the tincture, and thus far with the happiest results.

"This is one of several cases in which I have prescribed this remedy for similar affections, and with such marked advantage that I have great confidence in its efficiency in this class of cases.

"Yours very truly,
"B. Edson, M.D.,
"140 Park Place."

What need I say more to obtain for it a trial?

A convenient form for extemporaneous prescription is—

℞. Tinct. ferri chloridi,
Glycerinæ, aa..... ʒiv.
M.

S. One teaspoonful in a wine-glassful of cold water, through a glass tube, to be repeated according to circumstances. The glycerine in part conceals the iron taste.

There is a slight diuretic action. I have found no unpleasant effect on the bowels, and only a slight feeling of discomfort, which soon passed off, when it was taken on an entirely empty stomach.

How are we to explain this action of the iron tincture? Dr. T. Clifford Albutt, an excellent observer, says: "In iron we have two kinds of value; its value in ordinary small doses and in mild forms" (he is speaking of neuralgia), "when it removes simple anæmia; and its value in large doses—doses such as half

a drachm to a drachm of carbonate of iron, or of twenty to thirty drops of the sesquichloride tincture—when it seems, apart from the presence of any definite anæmia, to have *a special effect in modifying the morbid state of nerve-tissue.*"—(Liverpool and Manchester Med. and Surg. Reports, 1873. Quoted in Braithwaite's Retrospect, July, 1873, p. 41.)

Let the last eleven words (italics my own) of this quotation, then, for the time being, explain how it is that 20 or 30 minim doses of tincture of the chloride of iron abort coryzas.

December 3d, 1873.

Reports of Hospitals.

BELLEVUE HOSPITAL.

Notes of Practice and Peculiarities in Treatment.

GOUT.

The case was interesting in the fact that it illustrated a wonderful development of the disease in a boy aged twenty, without any real cause, unless it was an hereditary tendency. His fingers had the appearance of a bunch of carrots; nearly all the joints of the body contained gouty deposit, and the helix of his ears was filled with *tophi*.

CHRONIC DYSENTERY.

The old lady, aged seventy, had been sick five weeks, and came into the hospital with a history of diarrhœa. The case was interesting as illustrating one fact, namely, that it is important to go back to the history of a case and determine whether the first attack was one of diarrhœa or dysentery, which may give rise to an intelligent conclusion as to whether the present condition of a patient is one of chronic diarrhœa or chronic dysentery. The patient says she was taken with diarrhœa; had quite a number of passages every day, but that they were attended with considerable pain, and accompanied with a moderate discharge of blood and mucus. That was the key to the case. It was a case of chronic dysentery, engrafted upon an acute attack. An important element in the treatment of cases of chronic dysentery consists in a careful regulation of the diet for the patient. The objects to be had in view in regulating the diet are nourishment and finding some article of food which can be retained and digested. To obtain these is not infrequently trying to the ingenuity of the physician. Among the remedial agents employed, the fluid per-nitrate of iron and a decoction of the root of the Rubus Canadensis are sometimes very serviceable. Abscess of the liver sometimes occurs in connection with chronic dysentery.

SUBACUTE GASTRITIS.

The subject, who presented the disgorgement consequent upon an attack of this disease, was a woman aged twenty-eight, and married. She had been drinking *gin* for about ten days, had *accidentally* stepped from a ferry-boat into the river, and finally brought up at the hospital suffering from an almost incessant nausea and vomiting; gin, subacute gastritis, and vomiting succeeding each other.

Carbonic-acid water, pounded ice, and rest to the stomach were the chief features of the treatment. The general restlessness which was manifested in the case was well controlled by hypodermic injection of morphine. Rest to the stomach is obtained in severe and protracted cases of vomiting by nourishing the patient with injections of milk, beef-tea, and eggs. When the bowels are not moving in consequence of diarrhœa, patients can be very satisfactorily sustained in this manner, and perfect rest secured for the stomach.

LOCOMOTOR ATAXIA.

A case was noticed which recalled the fact that sensation is always diminished below the point in the body where the band passes about it. This may materially assist in determining the exact point of lesion in the spinal cord. Trace the sensation downwards to the point upon the body where it begins to diminish, and follow that line around to the spine.

ADMINISTRATION OF ETHER.

The administration of potass. bromid. grs. xxx., previous, and the same amount immediately following, or as soon as the patient can conveniently swallow, after the administration of sulphuric ether for the purpose of producing anæsthesia, is now regularly resorted to. The effect is to prevent the vomiting which so commonly follows the use of the anæsthetic.

IRREGULAR ACTION OF THE HEART

is very nicely controlled in very many cases by the administration of ext. nux vomica gr. ¼ three times a day. These doses may be increased to gr. ¼ t. i. d. It is said to be much more efficient and reliable than digitalis.

NURSING.

The question is very frequently asked, prior to the first confinement, Whether it will be policy for the woman to attempt to nurse the child? There are certain inquiries which may throw some light upon the "new probabilities" in the case.

First, Have the menstrual functions been properly performed prior to pregnancy? There is no special connection between the function of lactation and the function of menstruation, except that the cessation of one may indicate the commencement of the other; but it not infrequently happens that uterine disease, existing prior to pregnancy, perhaps returns after confinement, and then may materially interfere with the proper performance of the function of lactation.

Second, Examination of the breast during the period of pregnancy. As early as the fourth month a fluid can be pressed from the nipple, and at a later period the quantity of milk which can be pressed out is sometimes considerable. If the milk which can be obtained in this way contains an abundance of colostrum, the probabilities are that the woman will furnish sufficient milk after confinement to warrant the commencement of rearing the child by nursing the mother's breast. This rule is not invariable, but is sufficiently good to furnish probable results.

The woman commences nursing her child, and for two, or three, or four months the supply of milk is sufficient; but at the end of that time the supply is not equal to the demand, and artificial measures must be employed. What shall the new nourishment consist of? Substituting the milk of the ass or goat is believed to be a mere fancy, if circumstances are such that fresh milk from the cow can be obtained twice daily.

The most important difference between human milk and cow's milk exists in the casein. The casein of cow's milk forms itself into a hard, large lump, and very frequently coagulates in such manner that the child will vomit long pieces of coagulated milk, varying in size according to the size of the canal through

which these pieces must pass. To correct this result, the addition of lime or soda water to the cow's milk should be habitually resorted to in those cases where the cow's milk is not readily assimilated.

One drachm of carbonate of soda may be added to six ounces of water, and a tablespoonful of this added to every feeding of the child.

A tablespoonful of aquæ calcis may be employed in the same manner all through the period of nursing from the bottle, without incurring any bad results, but, on the contrary, secure good results.

The dilution of cow's milk will be necessary, and the amount of dilution will vary according to the age of the child and the quality of milk. Good cow-milk should be used for young children, one part water and two of milk, and the lime or soda water added to this.

During the summer months, when the child is most liable to be attacked with diarrhœa, if the child shows any tendency in that direction, the milk should be sweetened with sugar of milk and not cane-sugar.

ROOSEVELT HOSPITAL.

FRACTURE OF FEMUR.

It is believed by Dr. Lagarde, house-surgeon, that the best results are obtained in this class of cases, with reference to shortening, when the limb has been kept in an extended position by means of Buck's extension apparatus for several days—at least until all inflammatory action has subsided—before the permanent retentive apparatus is applied. It has been found that when a fractured femur has been placed in a permanent splint within a few hours after the injury has occurred, a much larger amount of callous induration occurs about the seat of fracture than when delay is made in the adjustment of a permanent apparatus until all inflammatory action has subsided. When the inflammatory action has subsided, no ether is used while applying the permanent splint. In the examination of some reports setting forth the extremely satisfactory results obtained by the employment of certain carefully devised apparatus in connection with the application of the permanent splint, with reference to the item of shortening, the question at once suggests itself, whether the results obtained may not be as much due to the fact that the adjustment of the permanent splint was delayed until all inflammatory action had subsided, as to any real superiority of the apparatus itself. It is doubtless a good principle to be governed by, in the treatment of fractures in general, to wait until inflammatory action has subsided before permanent fixtures are applied to the limb. One practical objection to the adoption of this plan is, the minds of the laity are "set," and they are very apt to insist that the bone shall also be "set at once" after a fracture has occurred.

SYNOVITIS, CHRONIC.

This class of cases are now being treated by employing passive motion, as much as is possible for the patient to bear without producing pain. If pain is developed, place the patient in bed, secure perfect rest, and as soon as the inflammation has subsided, again resort to passive motion. It is feared that some kind-hearted doctor will get into difficulty in attempting to apply this principle in private practice.

EXCISION AT ELBOW-JOINT.

Two cases in whom this operation had been performed, were additional instances of the triumphs of modern surgery. In one case the motions retained by the limb were remarkably perfect. Pronation and supination, flexion and extension, could be well performed. The operation had relieved the man of the presence of an almost useless member, and given in place of it a limb which will become as useful as was the arm previous to any attack of disease.

HYDROCELE.

A somewhat remarkable result was obtained in the treatment of a case of hydrocele by using an injection of pure Lugol's solution. The entire tunica vaginalis was removed, and the patient was making a rapid and satisfactory recovery.

OXYGEN IN PHTHISIS.

The employment of oxygen-gas in the treatment of phthisis was continued for some time, but has been discontinued on account of the expense attending its use.

Dr. Hutton, house-physician, informed me that during the time it was employed, the patients to whom it was administered did exceedingly well. The improvement in the general condition of the patient was such as to warrant its adoption in cases where expense was a secondary consideration. Its effect was certainly palliating, and perhaps retarding to the progress of the disease.

Progress of Medical Science.

GLYCERINE AS A MEANS OF DISGUISING MEDICINES.—We desire to call the attention of our readers to the use of glycerine as a means of disguising medicines, especially those of an oily nature. Some time since it was announced that if castor-oil be mixed with an equal part of glycerine and one or two drops of oil of cinnamon to the dose, it can scarcely be recognized. We have used this mixture a good number of times, and can confirm all that has been said of it. Children take it out of the spoon without difficulty. We have given it to doctors without their discovering that they were taking castor-oil.

In typhoid fever and other diseases in which turpentine is indicated, patients often object very much to its taste. The addition of half an ounce of glycerine to a six-ounce emulsion disguises almost completely the turpentine, especially if a drop of oil of gaultheria or of other volatile oil be added for each dose.

No doubt the principle is capable of wide extension. It is said that cod-liver oil may be disguised with glycerine and whiskey; and Dr. Herbert L. Snow writes to the *British Medical Journal* that an addition of a small quantity of glycerine (about half an ounce to an eight-ounce mixture) will altogether obviate the sensation of astringency produced by the chloride of iron dissolved in syrup.—*Canada Med. Record.*

ACTION OF CARBOLIC ACID ON THE URINE.—When carbolic acid has been applied to a raw surface a peculiar change has been observed by Mr. W. A. Patchette to take place in the color of the urine. A blackish or dark olive-green discoloration occurs in from four to forty-eight hours, and the urine resembles an infusion of tea or digitalis to which a little iron has been added. The discoloration does not appear with any regularity or constancy, and may follow the internal use of carbolic acid, but unless poisonous doses have been given, the color is not so deep as that produced by the external application of the acid.—*London Lancet.*

VALERIAN IN DIABETES.—Dr. Bouchard, of *La Charité* Hospital, has been making a trial of valerian in diabetes. In diabetes without sugar the medicine did not seem to diminish the quantity of urine, but azoturia was obviously amended. The quantity of urea discharged in the twenty-four hours was much diminished; it decreased from forty-five grammes (about eleven drachms) to ten grammes (two drachms and a half). The same results were observed in diabetes mellitus. In these cases, when there existed azoturia together with glycosuria, the quantity of urea always diminished under the influence of valerian. In some cases there was less excretion of water and sugar; but these effects seemed uncertain. Decrease in the production of urea was invariable. Valerian, therefore, prevents denutrition, and may be considered a saving remedy (médicament d'épargne).

Dr. Bouchard, in respect to this latter quality, quotes the customs of various Indian tribes, among whom the warriors during a month previous to going out to fight make use of valerian in every shape—in baths, in frictions, and internally. They ascribe to the substance the strength and courage which they feel in going through long marches, fatigue, and privation of food. This property of valerian has been observed in arsenic and bromide of potassium. Dr. Bouchard commenced with weak doses, which he gradually increased to one ounce of the extract, without having noticed any inconvenience.

APPLICATION OF GARGLES TO THE INTERIOR OF THE LARYNX.—*The Lancet* of November 1 says that at a recent meeting of the Clinical Society, Dr. H. Guinier, of Montpelier, was introduced to the Society, and showed, by means of the laryngoscope, that it was practicable to allow any fluid to pass beyond the epiglottis, and to remain between that organ and the vocal cords during the time occupied by a long expiration, or as long as the patient can "hold his breath." Dr. Guinier used water in his demonstration; the vocal cords were plainly seen through the fluid, and the operator also ejected the latter through his nose. Although the sensibility of the soft palate and parts adjacent is known to be, comparatively speaking, inconsiderable, a general impression appeared to exist among the members that much practice would be required on the part of the patient to bring about so successful a result as that achieved in this case by Dr. Guinier. The following rules must be observed and practised in the operation: 1. Raise the head slightly; 2. Open the mouth to a moderate extent, 3. Advance the chin and the lower jaw; 4. Sound, or make an intention of sounding, the double vowel œ. The author remarks that, as a consequence of these four movements carried on simultaneously, the pharnyx is widened, the soft palate and uvula are raised, the base of the tongue is depressed, and the liquid thus flows, by virtue of its own weight, into the laryngeal cavity.

ISCHIATIC HERNIA.—*The Dublin Jour. of Med. Sci.* of Sept. contains an account of a case of this exceedingly rare accident, which in this instance occurred to a woman aged about forty, and was brought about by lifting. The intestine escaped from the great sacro-sciatic foramen of the right side, and the tumor, which was about the size of a fœtal head at term, extended across the left thigh below the gluteal fold, preventing the woman from sitting. Taxis reduced the size of the tumor somewhat, but its entire reduction was impossible.

CHERRY-LAUREL WATER AS A VEHICLE FOR HYPODERMIC INJECTIONS.—Professor Luton says that no vehicle is better suited for narcotic substances, such as morphia and atropia, when administered subcutaneously, than the distilled cherry-laurel water. Besides adding its measure of hypnotic action to that of the principal medicament, it prevents, better than any other aromatic distilled water, the formation of mould, which readily takes place in solutions for hypodermic injections; being in this respect equal, at least, to eucalyptus water. Its contact with the tissues does not cause more pain than ordinary distilled water. When cherry-laurel water is injected alone, its physiological effects are the same as when it is administered by the stomach; but in an increased degree.—*Répertoire de Pharmacie.*

THE FATTY URINE OF HOT COUNTRIES.—Commenting upon Dr. Jules Creveaux's work on Chylosis or Fatty Hematuria of Hot Countries, the *Gazette Médicale de Paris* observed that this curious malady, hitherto unknown in our climate, has only been observed in Paris on subjects arrived from the isles of Bourbon, Maurice, etc., where it prevails in endemic form. In America, even, it is only observed between latitude 30° N. and 35° S. Another peculiarity of this singular affection, which is characterized by the emission of urine sometimes red as blood and sometimes as pale as chyle, is the diversity of opinion prevailing as regards its nature. Carter, of Bombay, and Beale, of London, believe that the chyle passes into the urine. Gubler considers it a lymphorrhagia of the uropoietic apparatus, and he explains the appearance of blood in the urine partly by the existence of blood-globules in the lymph, and partly by the coagulation of the solid matters of the lymph which have been deposited in the bladder in intervals of micturition, and which are only evacuated when the bladder is completely emptied by a forced contraction.

The author of the *brochure* cites a number of observations which go to support the opinion of M. Gubler.

According to Prof. Robin, the malady known by the name of chyluria is only a form of hematuria, a form in which the blood-plasm, passing into the urine, imparts to it its white color. Rayer and Cl. Bernard express the same opinion, and Bouchardat claims that the fat of the urine called chylus presents all the properties of the fat of the blood and not of the chyle.

According to Dr. John Harley the white matter of the urine is derived from the lymphatics and the blood-globules from a rupture of the capillaries at some part of the mucous membrane of the urinary apparatus. This vascular discharge is produced by helminth, the *distoma capensis*, which has been seen in all the cases from the Cape which he has examined.

According to M. Creveaux, naval physician, who publishes in his thesis the only case which he has observed, chylous or fatty hematuria is a product of two morbid conditions: one, general, marked by an augmentation of the fatty matter of the blood or lymph; the other local, marked by a lesion of vessels at some point of the urinary apparatus—lesion which produces the passage of uric acid, gravel, or the passage of helminths into the urinary apparatus.

During the past few years microscopic examination of the urine has shown the frequent presence of helminths, of their eggs and *débris* in the hematuria of hot climates.

Further researches, still, are necessary, however, to give us a full knowledge of this curious affection.—*The Doctor.*

A SUCCESSFUL REMEDY FOR TOOTHACHE.—This remedy consists in the use of injections which are ap-

plied to the gums in the vicinity of the diseased tooth. Dr. Dop has employed these injections in about one hundred cases. In twenty cases he used morphine, by which he obtained good but not permanent results; chloroform was found to be far preferable, and he now uses it exclusively. In sixty-two of eighty cases the results have proved extraordinarily favorable. Two drops suffice for an injection, which is made with the Pravaz, or ordinary hypodermic syringe. The canule is gradually pressed into the gum, and is allowed to remain in position for a few seconds. When removed, pressure is to be made with the finger over the puncture. In the large majority of cases one injection suffices to stop the pain, but it is sometimes necessary to repeat it after twenty-four hours.—*Corr. f. Z.* and *Norsk Mag. f. Laegevidenskaben*, Nov. 11, 1873.

Spontaneous Expulsion of a Calculus from the Bladder of a Female.—*El Anfiteatro Anatom. Español*, July 31st, 1873, contains a letter from Dr. José Benjumea, of Casariche, detailing the following case: The woman was sixty years of age, had had urinary trouble for about ten years, and had, at different times, passed several small calculi, having some pain previous to their expulsion. She had also had a nephritic calculus within the last two years. The presence of a vesical calculus was suspected, but the patient was unwilling to have a sound passed, though she suffered extremely for the four months preceding its expulsion, which occurred in April, while making an effort to defecate. The stone was ovoid in shape, and weighed 65 grammes. It was 7 cm. in length and 4 cm. in diameter. In May, when Dr. B.'s letter was written, there was still some want of contractility at the neck of the bladder, in consequence of the great distention to which the parts had been subjected.

Professor Mosler on the Treatment of Internal Diseases by the Introduction of Large Quantities of Fluid into the Intestine.—Gustav Simon has recently demonstrated the possibility of making fluids penetrate the whole length of the large intestine, thereby causing no injury to the part, by means of forced injections per anum. His investigations were conducted on two patients, both suffering from fæcal fistulæ in the right inguinal region. Water injected at the anus appeared at the fistulous opening in five minutes.

An important addition has been made to the investigations of Simon, in showing that the same result may be accomplished without the aid of forced injections. Instead of a syringe, a simple funnel or irrigator is used, to which an elastic tube is attached, provided with an olive-shaped tip. The olive-shaped tip being inserted at the anus, water is poured in at the funnel, and by raising or lowering the latter, the pressure of the column of water can be regulated as desired. To Alfred Heger belongs the credit of first suggesting this method, the advantages of which, he claims, are, that the apparatus is cheaper, easier cleansed, less liable to get out of order, and less readily permits admission of air. When the intra-abdominal pressure is under the atmospheric pressure, he thinks that but a very slight force will enable the fluid to enter the bowel. In giving ordinary clysters with this apparatus, it suffices that the body be in a horizontal position; but should it be desirable to fill the upper part of the large intestine, the intra-abdominal pressure must be decreased by a change of posture, and the patient is made to rest upon the knees and elbows, or better, with the upper portion of the body resting upon the breast and shoulders. By this method five to nine pints of water could be easily introduced before the sphincter yielded or water escaped at the side of the tube. This constrained position, however, proving often very irksome, causing sometimes violent headache in patients who were feeble or suffering from cerebral congestions, determined Mosler to attempt to accomplish the same object while the patient maintained the recumbent posture. He found it necessary merely to lengthen the tube somewhat, and raise the funnel a little higher than Heger had done. In this manner he poured in over three quarts within fifteen minutes, without a drop escaping at the anus. In order to prevent too rapid dilatation of the intestine, the flow was frequently interrupted by compressing the tube. By thus introducing three or four quarts of warm water, he has been able to relieve the most obstinate obstipation which had proved rebellious to all other remedies.

In order to ascertain positively to what extent the fluid penetrated in the intestine, various experiments were tried. It was repeatedly found that where before the injection the left inguinal region gave a tympanitic sound on percussion, after the injection it was dull. Experiments on the cadaver were made, but the loss of tonicity in the bowel rendered it incapable of retaining so large an amount of fluid. Finally, the question was settled by trial upon a patient who, in consequence of a gangrenous hernia, had a fistula at the junction of the colon ascendens with the cæcum. With the finger the pouch of the cæcum, as well as the ileo-cæcal valve, could be readily palpated. With the above-described apparatus one and a half litres of warm water were poured into the intestine, the funnel being held about two feet above the anus, the patient in the usual recumbent position. The fluid appeared at the fistulous opening in two minutes, before half the quantity used had left the funnel. The patient suffered no discomfort.

The conditions which furnish indications for the above method of treatment, Prof. Mosler groups under five heads, viz.: 1. The various forms of obstruction of the bowels, especially impaction of fæces. 2. For the reduction of internal hernia, as hernia retro-peritonealis and diaphragmatica, or, perhaps, in case of any form of hernia. The great dilatation and loading of the intestine necessarily exert a powerful strain from within. This treatment can be admissible only in the early stage, before the intestine has become weakened and so easily lacerated. 3. In numerous diseases of the large intestine, especially dysentery. The twofold benefit is indicated from first washing away irritating detritis, and secondly, from the topical application of astringent and disinfectant fluids. 4. In the various forms of icterus, especially catarrhal, as well as in cholelithiasis. According to recent researches, injection of water into the intestinal canal increases the secretion of bile; the secretion, before thick and viscid, becomes more watery and freer, and thus tends to loosen any catarrhal plug accumulated in the duct, and perhaps drive before it impacted gall-stones. The 5th indication is found in certain conditions during the treatment of helminthiasis. In the treatment of tape-worm it not unfrequently occurs that the remedies given drive the worm into the colon, where it reattaches itself by suction and cannot be further expelled. One or two quarts of warm water, with equal parts of milk, thrown into the intestine, will often succeed in separating the head and cause its complete expulsion. For the oxyuris vermicularis, which inhabits not only the rectum but the whole large intestine, the advantage of this method is likewise apparent. —*Berl. klin. Wochens.*, 45.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, January 1, 1874.

ARMY STAFF RANK.

THE question of increased rank for medical officers in the army is one of as great importance as the profession can now be called upon to discuss. In our previous issue we referred in a cursory way to the means which are being taken to secure this end; the changes proposed; and the necessity for a concerted action on the part of the profession at large.

Whenever a proposition of such importance as the one before us is to be considered, it is always well to canvass the necessity for change. The latter is well set forth in the memorial of the American Medical Association upon the subject, to some points of which, for the benefit of our readers and others interested, we shall take occasion to refer.

The committee which prepared this memorial has certainly performed its task in a very creditable and satisfactory manner. The information has been gained as the result of much painstaking inquiry, and the opinions expressed are not only those of the army medical officers, but, we venture to say, of every physician in the country.

The first point noted is, that in every other corps of the army every officer except the surgeon has a prospect of attaining the rank of colonel in a given time. The average length of service required in other corps to attain such rank is twenty-five years, and that of lieutenant-colonel twenty years. In contrast with this is the fact that there are at least twelve medical officers who have each served upwards of thirty years, and who are still of the rank of major. This unjust discrimination is glaringly apparent to any one who will give the subject an impartial consideration.

If it can be proved that the medical officer does not require for the discharge of his duties as much culture and as much intellect as in any other branch of the service, then the discrimination is a merited one, and as a profession we humbly abide the consequences. The opposite opinion, however, is now an admitted fact by every person, in or out of the army, who has had any opportunity for forming judgment in the premises. There is, in fact, no corps in the army that has not learned to appreciate and respect the medical corps, and this respect has been honestly earned and conscientiously maintained from the time that the American army as such first had an existence. There has hardly been a campaign in the general report of which some deservedly high compliment has not been paid to the medical staff, due acknowledgment of services rendered, and honest appreciation of the value of suggestions made in the care and transportation of the sick and wounded.

Not only do we maintain that the medical corps are on a par with any other in the army, but that as a corps it has a special claim for a recognition of services rendered. In the case of the vast majority of staff-officers the special education which fits them for their positions, which raises their qualifications to the required standard, is not only furnished by the government, but a good salary is paid them during their tuition. The medical man must obtain his education at his own expense, and this must be especially thorough to enable him to pass the ordeal of an army examination. We have not yet gone so far as to have an army medical school—which, however, we shall have eventually—and cannot expect that the Government can bestow upon army candidates the thorough medical education which the army boards require. We only mention the fact as one which should be taken into consideration in fixing a just premium upon the long and meritorious services of the medical officer. If there be any doubt as to what is required of the surgeon, and what he may perform, we have but to refer to the history of the army medical staff during the late rebellion. The history proved that the medical men who took part in this struggle were equal to every emergency upon the field or in the hospital; that in the organization and management of the latter they displayed a tact and ability which rose to the level of genius, and earned for themselves the reputation of the highest authorities in military hygiene and military surgery throughout the civilized world.

Chassaignac only a few years ago said to a distinguished American surgeon: "You have just reason to be proud of your country. America at this moment wields the surgical sceptre of the world." If justice be done to the army surgeon, if the records of the war prove anything, we must admit that the army surgeons have contributed to this enviable reputation as much, if not proportionately more, than any other class of scientific medical men. Coupled with these attainments, we have proved his fitness for his position as an officer. During the late war we often beheld the surgeon in charge of a hospital, with the rank of a first lieutenant, performing all the actual duties of a com-

mander of a post, and at the same time attending to the higher demands of his profession at the operating table, making resection, autoplasty, and amputation of the hip with a skill that would do credit to the occupants of our professorial chairs.

In the matter of strictly medical attainments, they were by no means behind their brethren in civil life. In every hospital the examination of cases was carried on with all the thoroughness possible with surrounding circumstances. Diseases were studied on a large scale, and to a purpose which makes the results of accumulated experience authoritative.

In the higher branches of medical as well as surgical research, the army surgeon has contributed his share. Not only has disease been studied in the generally accepted way, but all the refinements of microscopy have been brought to bear upon such investigations, and original observations of the greatest possible utility to science at large have been made by a more extended application of this instrument. In this connection we refer to that wonderful treasury of experience, the Medical and Surgical History of the Rebellion, which of itself is an everlasting monument of the industry and skill of the army surgeon, and which as a specially valuable contribution to our science, is unequalled anywhere. The Army Medical Museum, the work also of the medical corps, is of itself one of the most magnificent and valuable collections of specimens ever before brought together. This rebellion gave the best opportunity for the display of the scientific attainments of the medical corps, and has given to many of its members world-wide reputations as authors, observers, operators, and originators.

The Medical Library, already looked to as the national one, owes its all to the medical staff of the army, under whose auspices it was conceived, in whose care alone it has thriven beyond the calculation of the most sanguine medical bibliopoles. And yet the gentlemen who have arranged the medical and surgical history of the rebellion, who have brought the museum to its present perfection, the library to its present size, who have served the best years of their lives, who have used their brilliant attainments solely for the service of their country, who have endured all sorts of privations, who have refused to be allured by the rewards which reputation and skill would be sure to give them in civil life, are not only kept at a nominal grade, but our legislators have actually conferred on them the special distinction of a law forbidding them to hope for anything higher.

As might have been anticipated, there are vacancies in the medical corps, vacancies which will never, in our opinion, be filled. Young men cannot, will not enter an army in which such a narrow-sighted policy rules; and who can blame them?

We would respectfully call the attention of legislators to the facts in the case, which facts of themselves are the strongest possible proofs of the necessity of granting the moderate and modest demands of the petitioners. We call upon our readers to favor the measure as an act of principle, resting assured that what they can do for the army surgeon they can do for the profession at large, which he so worthily represents. There can be but one sentiment among the profession in regard to this matter, and let that sentiment be expressed in the shape of appropriate and telling resolutions from all the principal medical associations throughout the United States.

The demands are modest, and are not calculated to infringe in any respect upon the rights of the other corps. The only thing asked for is such an increase in rank and pay as shall be in some way proportionate to what men of equal skill and attainments have a right to expect in civil life.

If it cannot be obtained, let the profession as a body dissuade every promising young man from entering the corps, and let the vacancies in the staff be the argument in favor of a change, when persuasion shall have been used in vain, reason shall have been spent, and further discussion shall have ended.

Reviews and Notices of Books.

LECTURES ON CLINICAL MEDICINE. By A. TROUSSEAU, late Prof. of Clin. Med. in Faculty of Medicine, Paris, etc., etc. Translated from the third revised and enlarged edition by SIR JOHN ROSE CORMACK, M.D., F.R.S.E., and P. VICTOR BAZIRE, M.D. In two vols. Philadelphia: Lindsay & Blakiston. 1873. 8vo, pp. 992.

THE power of imparting instruction, of bringing out the salient points, of impressing upon the learner the particular significance and force of given data, and of explaining in a satisfactory manner the reasons why, very few teachers possess. The particular kind of teaching termed clinical requires this faculty developed to a high degree. That Prof. Trousseau was the leader in this particular branch is now unquestioned. His works upon clinical medicine are now the only remembrances of the power and skill of this great master.

It is useless to attempt a critical review of the work before us, as such would involve a glance over the greater part of the field of clinical medicine. As far as possible the subjects are arranged after a given system, but this arrangement, considering the character of the work and the circumstances under which the lectures were given, could not very well be better. In reading over lecture after lecture, we stand at the bedside of the patient and almost imagine we can hear the voice of the great teacher. The style is colloquial, and consequently entertaining, perspicuous, and impressive. The manner of arranging the different divisions of a given subject for lecture is very methodical, but the rigidity of division is lost in the almost imperceptible gliding of one part into another. The history of disease is full, the detail of symptoms is accurate and exhaustive, and their relations to each other markedly discriminative. In his recital of the phenomena of any disease, or of its treatment, he has the happy faculty of noting an exception to a rule, or of impressing an established principle by the introduction of some

anecdote of his experience, which lightens the dullest of topics into pleasant, profitable reading.

Many subjects which are considered of minor importance by many writers receive from our author very extended consideration; and when we see that these subjects are mostly confined to the commoner diseases, the work becomes of peculiar value to a large class of professional readers. The very fact of Trousseau being an experienced teacher rendered him appreciative of the wants of the general practitioner, and his courteous attention to the little things in the consideration of disease has always been one of his distinguishing features. No one can read his work without being impressed with this fact. As a whole, then, the work has our unqualified recommendation.

THE MEDICAL DEPARTMENT OF THE U. S. ARMY, FROM 1775–1873. Compiled under the Direction of the Surgeon-General. By HARVEY E. BROWN, Assistant-Surgeon, U.S.A. Washington, D. C. Surgeon-General's Office: 1873. 8vo, pp. 314.

THIS volume has been prepared for the purpose of giving an authoritative history of the organization of the Medical Department of the Army from the siege of Boston, in 1775, up to the present time. It is divided into five parts: 1. The period of the Revolution; 2. From the close of the Revolution to the reduction of the army in 1821; 3. From 1821 to the declaration of war against Mexico; 4. Commencement of the Mexican war until the bombardment of Fort Sumter, in 1861; 5. From the commencement of the Rebellion to the present time.

Although it would appear that this work was prepared more especially for the medical officers of our army, it is interesting in an historical point of view to every professional reader. The data upon which the history is generalized has evidently been collected with great care, and many extremely interesting points connected directly and indirectly with the earlier officers of the army, especially during the time of the Revolution, are related. The medical officer is so closely connected with the organization, etc., of an army, that the history of the latter becomes a part of his history. The reader who peruses this work will become impressed with the fact, and can appreciate the responsibilities of the Army Surgeon, and the deservedly high appreciation in which he is held by his superiors in command. Notwithstanding that there is an effort to make every statement as concise as possible, Dr. Brown does not lose the opportunity of inserting here and there some extremely interesting historical anecdotes, many of which will be found, as far as we know to the contrary, the first time in print. As a history of the army medical staff it is, as it should be, an honorable record of a noble body men.

SIX MONTHS UNDER THE RED CROSS WITH THE FRENCH ARMY. By GEO. HALSTEAD BOYLAND, M.D., Asst. Surg. Major, Army of the Rhine. Cum, Robt. Clark & Co. 1873, pp. 232.

THIS is a work which is evidently more interesting to its author than to any one else. We say this in no captious spirit, but merely for the sake of expressing our opinion that the author has made a mistake if he considers his disconnected "jottings" can be woven into a connected narrative by any one but himself. It is nothing more than a personal diary, and as such contains little else than short notes, and very commonplace and unsatisfactory descriptions. As a whole, it gives the reader some idea where the author has been, a very faint idea of what he has seen, and an exceedingly poor estimate of his descriptive qualities.

BODY AND MIND; an Inquiry into their Connection and Mutual Influence, especially in reference to Mental Disorders. An enlarged and revised edition, to which are added Psychological Essays. By HENRY MAUDSLEY, M.D., Fellow Royal Coll. of Physicians; Prof. Med. Jurisprud., Univ. Coll., London. London: Macmillan & Co. 1873. 12mo, pp. 342.

THE author has endeavored to step from the somewhat beaten track in an attempt to prove a strictly physiological relation between the mind and body. It is shown, by a very ingenious argument, that the dependencies of mind upon body, and *vice versâ*, are so intimate that it is impossible to understand the one without a knowledge of the other. In contradistinction to the purely metaphysical notion of mind, he maintains, by analogical reasoning, that the brain is nothing more than a highly developed nervous centre, the peculiar functions of which hold a similar relation to it, as do the simpler functions to the less significant ganglia. Some very curious facts are related in support of this view.

Having admitted thus much, we are prepared for the deduction that insanity is a derangement of one of the complex functions of the brain, which must be studied in connection with nervous derangement generally; the latter condition, hereditary or acquired, forming the tangible basis of a predisposition to insanity.

The lectures, and also the psychological essays, are confined to this line of argument, and are full of suggestions and ingenious reasoning. The work is written in a charming and elegant style, and of itself, independent of its subject, is worthy of perusal by every one who may be curious to know how much well-chosen language can adorn what would generally be looked upon as an abstruse and heavy subject.

THINKERS AND THINKING. By J. E. GARRETSON, M.D. (John Darby). Philadelphia: J. B. Lippincott & Co. 1873. 12mo, pp. 254.

ANY one who has read "Odd Hours of a Physician," by John Darby, has prepared himself to appreciate the present work; the healthful philosophy of the former gives him a relish for the close and appreciative study of the latter. The style is singularly concise, almost peculiarly so, judging from the latitude which the author has given himself in his previous work. But this terseness is in keeping with a subject in which a more than ordinary care, in the choice of the right words in the right places, is necessary to give a precision to thought. As such, the work cannot be read hurriedly, but with slow and patient thinking. It is only calculated for a certain class of readers who can relish the discussion of the subjects of which the work treats, viz., the great thinkers and their systems of thinking. To such we commend the work as one of singular merit.

ARTICLES IN OUR EXCHANGES.

ANATOMY AND PHYSIOLOGY.

Peristaltic arterial action. JOHN J. MASON. *N. Y. Med. Jour.*, Dec., 1873.

Contributions to pathological physiology. JOHN. P. METTAUER. *Bost. Med. and Surg. Jour.*, lxxxix., 23.

Relations of the extensor tendons of the knee. LORINSER. *Wiener Med. Wochen.*, xxiii., 40.

The structure of the gray matter of the brain. C. COLGI. *La Nuova Liguria*, August, 1873.

Microscopic contributions to the anatomy and physi-

ology of the kidneys. R. HEIDENHEIM. *Archiv f. Mikroskop. Anatom.*, x., 1.

On the possibility of abstracting the alkali in living animals. E. SALKOWSKI. *Virchow's Archiv*, lviii., 1.

Histology of the heart. PAUL LANGERHAUS. *Ibid.*

Epithelia of multiple layers. *Ibid.*

PATHOLOGY AND PRACTICE OF MEDICINE.

Diagnosis and treatment of diseases of the aortic valve. WM. PEPPER. *Med. and Surg. Reporter*, xxix., 23.

Origin, nature, and treatment of fever. RAUSCHENBERG. *Atlanta Med. and Surg. Jour.*, xi., 6–7.

Cases of floating kidneys. ABRAM SAGER. *Peninsular Jour. of Med.*, ix., 6.

Scarlatina. J. J. MULHERAN. *Ibid.*

Rupture of the auricle from compression of the thorax. ROBERT AMORY. *Bost. Med. and Surg. Jour.*, lxxxix., 24.

Mitral obstruction. PEPPER. *Med. and Surg. Reporter*, xxiv., 24.

Typhoid fever. F. S. NEWLIN. *Ibid.*

Apoplectic epileptiform convulsions, etc. J. T. TAYLOR. *N. Y. Med. Jour.*, December, 1873.

Goitre and Cretinism. WOZENCROFT. *Pacific Med. and Surg. Jour.*, vii., 6.

Abscess of the liver and discharge of gall-stones. GIBBONS. *Ibid.*

Aphasia. BOARDMAN. *The Northwestern Med. and Surg. Jour.*, iv., 6.

Dysentery. PHILLIPS. *Ibid.*

Fox on diseases of the stomach, 16 pages. *Med. News and Library*, xxxi., 372.

Whooping-cough as a cause of spinal caries. BENJAMIN LEE. *Cincin. Med. News*, ii., 11.

Pathology of malignant and semi-malignant growths. HAUGHTON. *Ibid.*

Premonitory symptoms of insanity. BIGELOW. *Ibid.*

Epidemic cerebro-spinal meningitis. MINOR. *Cincin. Lancet and Observer*, xvi., 12.

Malposition of the abdominal and thoracic viscera. ALLEN. *Richmond and St. Louis Med. Jour.*, xvi., 6.

Observations on cerebro-spinal affections. MORELLI. *Sperimentale*, August, 1873.

The question of the pathological dilatations of the heart. CHINONE. *Ibid.*

Intermittent fever complicated with aphasia. MANZINI. *Ibid.*

On the miliary fever. BORGI. *Ibid.*

Lesion of the pulmonary valve, with gangrene of the right lung. NAMIAS. *Giornale Veneto de Med. Scient.*, July, 1873.

Cholera of 1873 in the Venetian counties. *Ibid.*

A variety of intestinal hemorrhage in typhoid fever. MACLAGAN. *La Nuova Liguria*, June, 1873.

Ætiology and therapeutics of pyæmia. KANLER. *Ibid.*, July.

Diseases of the brain and spinal cord. MORELLI. *Sperimentals*, September, 1873.

Case of helminthiasis. *Revista Medica, Rio de Janiero*, No. 1, 73.

Case of acute peritonitis with effusion. J. DA SILVEIRA. *Ibid.*, No. 2.

Observations on a typical case of typhoid. H. C. *Ibid.*, No. 3.

Beriberi on apyretic affections. MAMORÉ. *Ibid.*, 4.

Palustrial cachexia with intermittent fever. *Ibid.*

Peritonitis. TORRES HOMEM. *Ibid.*, 6.

Scarlatina hemorrhagica. BRUM. *Ibid.*, 7.

Lesions of yellow fever. CONTINHO. *Ibid.*

Autopsy in a case of intussusception. HEILBERG. *Norsk Mag. f. Laeg.*, 10, 1873.

Congenital malformation of the heart. SCHUMACHER. *Wien. Med. Wochensch.*, 37, 1873.

Lesions of the vessels in tuberculosis. THAON. *Allg. Wien. Med. Ztg.*, 38, 1873.

Cynanche cellularis maligna. OPPOLZER. *Ibid.*

Case of saturnine epilepsy with mental aberration. LEIDESDORF. *Ibid.*, 44.

Contagion, miasma, and contagious miasmatic diseases. KÜCHENMEISTER. *Ibid.*

Auscultation of the abdomen. SOMMERBRODT. *Berl. Klin. Wochensch.*, x., 41.

Mediastinal pericarditis and the accompanying pulse. KUSSMAUL. *Ibid.*, 39.

Cure of pyo-pneumothorax by paracentesis. VON FOLLER. *Ibid.*

Forensic importance of epilepsy. SANDER. *Ibid.*, 42.

Local treatment of cavities in the lungs. MOSLER. *Ibid.*, 43.

Treatment of internal diseases by introduction of large quantities of fluid into the intestine. MOSLER. *Ibid.*, 45.

Case of Cheyne-Stokes' respiration. CHVOSTEK. *Wien. Med. Wochensch.* xxiii., 39.

Thoracentesis. RUPPRECT. *Ibid.*, 41.

Diagnosis of cholera. HERMANN. *Ibid.*, 46.

Case of diabetes mellitus. HAHN. *Allg. Med. Cent. Ztg.*, xlii., 88.

Constipation in pneumonia. SKODA. *Allg. W. Med. Ztg.*, xviii., 39.

Affections of the brain and their treatment. RICHTER. *Schmidt's Jahrbücher*, No. 7, 1873.

On a peculiar form of chronic hemorrhagic peritonitis, and on the hæmatoma of the peritoneum. FRIEDREICH. *Virchow's Archiv.*, lviii., 1.

Neuropathic origin of simple hydruria from meningitis cerebro-spinalis epidemica, from injury and from syphilis. MOSLER. *Ibid.*

Embolic diffusion of melano-sarkoma. EBERTH. *Ibid.*

On the brown induration of the lungs. ORTH. *Ibid.*

On the pathological histology of the female breasts. LANGHANS. *Ibid.*

Paralysis glosso-labialis laryngea. FRANKEL. *Der Irrenfreund*, 8, 1873.

The cerebral pneumonias. REISLAND. *Memorabilien*, xviii., 9.

Locomotor ataxia with aphasia. BACCHANT. *The Med. Herald*, vii., 6.

SURGERY.

Case of bony anchylosis of the hip-joint. SANDS. *N. Y. Med. Jour.*, December, 1873.

Excision of the lower jaw for osteo-sarcoma. LITTLE.

Recovery from bite of rattlesnake. F. C. BEATTIE. *Ibid.*

Case of syphilitic laryngitis. MANN. *Ibid.*

Spontaneous dislocation of the clavicles. HOLDEN. *Ibid.*

Gunshot injuries of the knee-joint. *Detroit Review of Med.*, 12.

The mercy of prompt surgery. MCGRAW. *Ibid.*

Encysted stone in the bladder. MILLER. *Pacific Med. and Surg. Jour.*, vii., 6.

Painless incisions without anæsthetics. *Med. Examiner*, xiv., 22.

Skin-grafting. WHITTAKER. *Clinic*, v., 21.

Operation for hypospadias. BROWN and ISHMAEL. *Richmond and Louisville Med. Jour.*, xvi., 5.

Case of passage of hairs from the bladder. SEWELL. *Canada Med. and Surg. Jour.*, ii., 4.

Address on surgery. HINGSTON. *Ibid.*

Operation to relieve obstruction of the bowels. CHEEVER. *Boston Med. and Surg. Jour.*, lxxxix., 17.

Use of catheters in hypertrophy of the prostate. CURTIS. *Ibid.*, 22.

Esmark's method of amputation in London. SIMMONS. *Western Lancet*, ii., 2.

Compound fracture of the humerus. ROBERTSON. *Ibid.*

Certain deformities of the hand. BRIGHAM. *Ibid.*

Neurotomy. MITCHELL. *Phil. Med. Times*, iv., 110.

Case of gunshot wound. SHACKELFORD and HEPPEL. *American Practitioner*, viii., 48.

Fatty tumor of the bladder. ELEAN. *Ibid.*

External perineal urethrotomy. GARDNER. *Nashville Jour. of Med. and Surg.*, xii., 5.

Case of sarcomatous disease of the antrum. SHRIVER. *Cincinnati Lancet and Observer*, xvi., 12.

Treatment of gravel and calculi. TYSON. *Phil. Med. Times*, iv., 3.

Skin-grafting. GIRARD. *Ibid.*

Foreign bodies in the air-passages. BURCH. *Rich. and Louisville Med. Jour.*, xvi., 6.

Case of wound of the brain. MASTIN. *Ibid.*

Spontaneous gangrene. GONZALEZ OLIVARES. *Anfit. Anat. Espan.*, No. 18.

Tumors of the mamma and their diagnosis. SIERRA CARBO.

Surgery in Germany. ROSSANDER. *Hygeia*, No. 9, 1873.

Pathogenesis of vesical calculi. CANTALAMESSA. *Bul. Scienze Med.*, July and August, 1873.

Fibrous cyst of the neck. GRILLI. *Sperimentale*, August, 1873.

Colotomy for cancer of the pancreas. NAMIAS. *Giornale Veneto de Med. Scient.*, July, 1873.

Enterotomy for traumatic occlusion of the descending colon. *Ibid.*

Tetanus. RENZI. *La Nuova Liguria*, July, 1873.

Inguinal hernia complicated with the testicle in the inguinal canal. *Ibid.*

Migration of intestinal lumbricoids into the female bladder. TENDERVINI. *Ibid.*, August.

Varicose aneurism of the right femoral artery. ARATO. *Ibid.*

Epithelial cancer of the tongue. *Ibid.*

On the best method of studying clinical surgery. SABOIA. *Revista Medica*, Nov. 1, 1873.

Osteoma of the inferior maxilla. FILHO. *Ibid.*

Fistula in ano. SABOIA. *Ibid.*, No. 3.

Osteo-myelitis of a stump. FILHO. *Ibid.*, No. 4.

Extirpation of tumors by the elastic ligature. DITTEL. *Allg. W. Med. Ztg.*, xviii., 42.

Chronic periostitis. FÜRSTENHEIM. *Berlin. Klin. Wochensch.*, x., 41.

Local malacia of the leg. CZERNY. *Wiener Med. Wochensch.*, xxiii., 39.

Extirpation of four cancerous tongues. WEICHSELBAUM. *Ibid.*, 42.

Cure of goitre. *Ibid.*, 43.

Injections of iodine into acutely inflamed tissues. MENZEL. *Ibid.*, 45.

Reduction of a luxation upon the foramen ovale, of six months' standing. PEITAVY. *Ibid.*, 47.

Contusion of the thorax with laceration of the liver, etc. FRONMÜLLER. *Memorabilien*, xviii., 9.

Injuries from foreign bodies. LANGENBECK. *Ibid.*

MATERIA MEDICA AND THERAPEUTICS.

Progress of electricity in medicine and surgery. CALDWELL. *Med. and Surg. Reporter*, xxix., 22.

Pepsin. T. CURTIS SMITH. *The Southern Medical Record*, iii., 2.

Alleged death from ether. PROFESSOR BIGELOW. *Boston Med. and Surg. Journal*, lxxxix., 21.

Therapeutic effects and uses of mercury. DOUGHTY. *Atlanta Med. and Surg. Journal*, xi., 6, 7.

Pancreatine. DOBELL. *Boston Med. and Surg. Journal*, 24.

Fluid extract of œnothera biennis in diarrhœa. A. L. CARY. *Chicago Med. Times*, v., 9.

Carbolic acid in hydrocele. HOGEBOOM. *Kansas Med. Herald*, vii., 6.

Importance of medicated inhalations in diseases of the air-passages. MASSEI. *Sperimentale*, Sept., 1873.

Physiological action of alcohol on the human organism. MORELLI. *Ibid.*, August.

Indications and counter-indications for thoracentesis. PIZZORNO. *Nuova Liguria*, August.

Experiments with Marini's febrifuge elixir. BRUGNOLI. *Bul. Scienze Med. Bologna*, July and August, 1873.

Pharmacological report of the World's Fair in Vienna. SANDAHL. *Hygeia*, No. 9, 1873.

Steaming; its employment and method of production. HANSEN. *Norsk Mag. f. Laeg.*, No. 11, 1873.

Hydrate of chloral for alcoholism. SELLO. *Allg. Med. Central Ztg.*, xlii., 83.

Transportable pneumatic apparatus for the mechanical treatment of respiratory diseases. WALDENBURG. *Berl. Klin. Wochenschr.*, 39, 1873.

Hermetic transfusion apparatus. ROUSSEL. *Wien. Med. Wochensch.*, 37, 1873.

Hydrochlorate of apomorphia. FRONMÜLLER. *Memorabilien*, xviii., 9.

Poisoning by tincture of aconite. CLEVELAND. *Clinic*, v., 21.

Kitchen medicine. COHENS. *Phila. Med. Times*, iv., 110.

On the use of sulphate of atropine for profuse perspiration. FRÄNTZEL. *Virchow's Archiv*, lviii., 1.

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Ovariotomy. CLUNESS. *Pacific Med. and Surg. Jour.*, vii., 6.

Fibrine uterine tumor treated by chloride of ammonium. HATCH. *Ibid.*

Chronic endometritis. J'ANSON. *Rich. and Louis. Med. Jour.*, xvi., 5.

Case of acephalous monster. SHIRRIFF. *Can. Med. and Surg. Jour.*, ii., 4.

Fœtal physical diagnosis. WILSON. *Am. Practitioner*, viii., 48.

Premature rupture of the fœtal membranes. CHESNUT. *Ibid.*

Eclampsia. MOORE. *Atlanta Med. and Surg. Jour.*, xi., 6–7.

Treatment of puerperal convulsions. HUYETTE. *Ibid.*

Phlegmasia dolens. HAGNER. *Rich. and Louis. Med. Jour.*, xvi., 6.

Ovarian tumor treated by tapping, compress, and bandage. KESLER. *Ibid.*

Extraction of the head after version. COHEN. *Allg. Med. Cent. Ztg.*, xlii., 86.

Partus præmaturus artificialis. FÜLLENBAUM. *W. Med. Wochensch.*, 40.

Case of spontaneous rupture of a cystic ovary. MENZEL. *Ibid.*, 37.

Division of the sphincter ani for recto-vaginal fistula. LIEBMANN. *Ibid.*, 42.

Traction on the funiculus for separation of the placenta. COHEN. *Allg. Med. Cent. Ztg.*, 96.

Uterine polypi as a cause of abdominal ascites. PICCIRILLI. *Nuova Liguria*, June, 1873.

Double ovariotomy. FILHO. *Revista Medica*, No. 1, 1873.

Gynæcologia. SABOIA. *Ibid.*, No. 5.

Large adherent cysts within the cervix uteri composed of one of Sappey's glands. Excision of the cervix. MEDINI. *Bul. Scienze Med.*, July and August.

Excrescences and tumors which occur in and about the female urethra. RIZZOLI. *Ibid.*, Sept.

Cure of an extensive urethro-vesico-vaginal fistula by the actual cautery. D'ORMEA. *Ibid.*

OPHTHALMOLOGY AND OTOLOGY.

Condition of the fundus oculi in typhoid. PETERSHAUSEN. *Detroit Review of Med.*, No. 12, 1873.

Malignant disease of the ear. HARLAN. *Phila. Med. Times*, iv., 3.

Purulent inflammation of the middle ear, with paralysis of the facial nerve. GRUBER. *Monatssch f. Ohrenhkde.*, vii., 10.

Emphysema from catheterizing the Eustachean tube. VOLTOLINI. *Ibid.*

Action of strychnine upon healthy and amblyotic eyes. COHN. *W. Med. Wochensch.*, xxxiii., 42.

Ophthalmic examinations in the schools of Wiesbaden and comparison with results obtained elsewhere. VON HOFFMANN. *Klin. Monatsbl. f. Augenhkde*, xi., October.

Retinitis hemorrhagica in diabetes mellitus. HALTENHOFF. *Ibid.*

Report on cataract extractions. ZEHENDER. *Ibid.*, November.

Ectropion sarcomatosum utriusque conjunctivæ cured by excision of conjunctiva. TALKO. *Ibid.*

Sarcoma conjunctivæ. *Ibid.*

Epithelioma conjunctivæ bulbi. *Ibid.*

Telangiectasia conjunctivæ bulbi. *Ibid.*

Extravasation between optic nerve and sheath and into left vitreous humor from rupture of the arteria meningea media. *Ibid.*

Foreign bodies in the cornea. HEILBERG. *Norsk Mag. f. Laeg.*, No. 11, 1873.

Anomalies of accommodation and refraction. GOUVEA. *Revista Medica*, No. 7.

Studies in ophthalmometry. LOBO. *Ibid.*, No. 1.

Double amaurosis cured by hypodermic injections of strychnine. GOIETTI. *Sperimentale*, August, 1873.

Staphyloma cured by iridectomy. POWERS. *Western Lancet*, ii., 2.

DERMATOLOGY AND SYPHILOGRAPHY.

The transmission of syphilitic contagion in the rite of circumcision. TAYLOR. *N. Y. Med. Jour.*, December, 1873.

Tinea sycosis. WOOD. *Phila. Med. Times.*, iv., 110.

Manifestations of venereal disease in the male and female. KENNARD. *St. Louis Med. and Surg. Jour.*, x., 12.

Treatment of telangiectasia. CRÜWELL. *Allg. Med. Cent. Ztg.*, xvii., 87.

Treatment of syphilis. ZEISSL. *W. Med. Wochensc.*, xxiii., 46.

Literature of syphilis. PROKSCH. *Med. Clin. Central-bl.*, viii., 41.

The recent epidemic of small-pox. TEMPINI. *Nuova Liguria*, August, 1873.

Case of secondary syphilis. BRANDÃO. *Revista Medica*, No. 2, 1873.

Studies on the bronze disease. VERARDINI. *Bul. Scienze Med.*, July and August, 1873.

HYGIENE.

Organic poisons. GRAY. *The Med. Examiner*, 23, 1873.

School-house ventilation. LEEDS. *Sanitarian*, i., 9.

The Bermudas. *Ibid.*

Artificial feeding. WALKER. *Ibid.*

Method of investigation for ascertaining the cause of cholera. Memorial of the Royal Cholera Commission. *Med. Cour. Bl.*, xliii., 33.

Origin and spread of epidemic cholera. ALOIS MARTIN. *W. Med. Wochensc.*, xxiii., 38.

MISCELLANEOUS.

Accommodation for the insane on the cottage plan. HALLOCK. *N. Y. Med. Jour.*, Dec., 1873.

The medicine of theory and the medicine of nature. BARTLETT. *Ibid.*

Essay read before the Military Tract Medical Association. *Med. Examiner*, 23.

Dr. Caius. WHITTAKER. *The Clinic*, 26.

The aleuts of Alaska. MEANY. *Pac. Med. and Surg. Jour.*, vii., 6.

Proceedings of the Sacramento Soc. *Ibid.*

Proceedings of the San Francisco Soc. *Ibid.*

The Harding murder case. WRIGHT. *Cincin. Med. News*, ii., 11.

Transactions of the Chicago Soc. of Phys. and Sur. *Chicago Med. Jour.*, xxx., 12.

Clarke Co. Med. Soc., Oct. meeting. *Cincin. Med. News*, ii., 11.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, Nov. 12, 1873.

DR. ERSKINE MASON, PRESIDENT, in the Chair.

(Continued from page 625.)

THE PATHOLOGY OF TALIPES VARUS.

DR. A. B. CROSBY said: I have the honor of presenting to the Society a leg which I amputated three months since, for incurable talipes varus. The patient was a young man, twenty-one years of age, a tinman by trade, who had suffered from birth. The patient walked on the outer border of the foot, where there was a large callosity covering the base of the fifth metatarsal and cuboid bones.

He suffered so much pain in walking, from pressure on the filaments of the external saphena nerve, that he voluntarily sought an amputation for relief.

The only interest attached to the amputation was the fact that it was done upon a perfectly healthy man, who was suffering neither from injury nor disease. The patient was therefore treated like a healthy man; after the amputation getting an ordinary full diet, and making an exceptionally rapid recovery.

The specimen presents several points of interest. The atrophy of the foot and leg characteristic of long continued talipes was very marked in this case. It is the theory of the orthopædists that the atrophy, diminished temperature, and cyanotic appearance is due to the bending of the vascular channels out of their natural position, by which both the ingress and egress of blood is much diminished and retarded. In this specimen the anterior tibial and peroneal arteries had eventually become obliterated; so that at the amputation only one vessel required deligation—viz., the posterior tibial.

If, in a case of congenital talipes, the foot is immediately carried into a normal position and retained there, the bent vessels are straightened, and the foot and leg may then be fully nourished, and atrophy avoided. The specimen is also interesting in another connection. It will be seen that the leg and foot have been carefully dissected, so as to show their mechanism. It will be observed that this foot can be both inverted and everted, the former being much the freest motion. A careful examination of the parts in this specimen shows that this lateral motion of the foot occurs between the astragalus and os calcis. The theory, advanced by some, that this lateral motion takes place at the ankle, is shown by this specimen to be incorrect.

The astragalus is so deeply received between the malleoli and so firmly held by the lateral ligaments, that the motions of flexion and extension are alone permitted. The ankle is thus seen to be a purely ginglymoid articulation.

The specimen also shows, that of the twelve muscles passing from the leg to the foot, nine are inserted anterior to the mediotarsal articulation. The three remaining muscles, viz., the gastrocnemius, soleus, and plantaris, are all inserted into the tuberosity of the os calcis.

The mediotarsal articulation is seen to be very loose, admitting of flexion, extension, adduction, abduction, and a marked degree of rotation. It is at the mediotarsal articulation that the distortion of club-foot occurs.

In talipes calcaneus the ankle is in fault, but in no

other variety; and hence the term talipes is a misnomer.

In talipes equinus, the heel seems to be drawn up as though the distortion was at the ankle; but a careful examination will show that the heel is not drawn up, but that the foot anterior to the mediotarsal articulation has dropped downward, the result of paralysis of the extensor muscles.

In this specimen there was an equinal element in the distortion; but if the bones of the leg are held in a vertical position, it will be seen that the os calcis is at right angles to the leg, while the anterior part of the foot droops.

It will also be seen that the plantar fascia in this case was much shortened and contracted, by which the antero-posterior arch of the foot has been increased, and a talipes cavus engrafted on the other distortion.

The talipes varus in this specimen was due, as may be seen, to spastic contraction of the anterior tibial, and measurably of the posterior tibial, muscles. The peroneal muscles were manifestly paralytic, and thus the tibial muscles readily rotated the foot inward.

Lastly, the tarsal bones, from continual pressure, have, as may be seen, become permanently misshapen and deformed.

The specimen shows the excellent preservative properties of carbolic acid. The leg was amputated in hot weather; was covered with a roller-bandage wet in carbolic acid, and then rolled up in a newspaper.

Two months and a half later it was unrolled, found in a perfect state of preservation, and the dissection which I have exhibited was made at that time.

CHRONIC PACHYMENINGITIS—HYPOSTATIC PNEUMONIA—OPEN FORAMEN OVALE—CYSTIC, FATTY, AND WAXY KIDNEYS—FATTY AND WAXY LIVER—ACUTE ENTEROCOLITIS.

DR. HALL presented specimens of the above with the following history:—

Johanna Murphy, æt. sixty-six years, was admitted to Charity Hospital, August 16th. No previous history of any trouble whatsoever. On admission, complained of severe neuralgic pain in the head; gave potass. bromide, 30 grs. t. i. d. After two days a diarrhœa set in; treated with Squibb's mixture without improvement. In a week dysentery ensued; frequent desire to go to stool, and severe tenesmus and tormina accompanying each action of the bowels; treated with tr. catechu, tr. opii, and mist. cretæ co. Two days preceding death, typhoid symptoms developed; great pain in right iliac region; tympanites, frequent stools; temperature 102¼°. Day preceding death, persistent vomiting; tongue coated and dry. Gave creosote, gtt. ½ and acid hydrocyan. dil., gtt. i. No delirium until three or four hours before death; death from exhaustion.

Post-mortem, twenty-two hours after death: Body medium size, well-nourished; rigor mortis.

Dura mater.—Chronic pachymeningitis (not old). This condition confined to superior portion of dura mater. Some few small hemorrhages between the layers of new formation.

Pia mater.—Some few opacities; vessels dilated, and exceedingly tortuous; considerable sub-arachnoid fluid.

Brain.—Tissue firm; markedly pinkish hue; puncta vasculosa large and numerous.

Vessels.—Present no abnormalities.

Lungs.—Lower lobes of both intensely congested and œdematous; lower lobe, right side, pneumonic process present; surface granular and friable, of a dark, reddish-gray color, and devoid of air. The upper lobe of this side contained a cheesy mass about ½ an inch in diameter, enclosed within an encapsulating membrane, which membrane contained vessels intensely congested. This caseous mass was situated in an angle formed by the bifurcation of large branches of the pulmonary artery; many small branches could be traced to the encapsulatory membrane, where their calibre was suddenly occluded.

Heart.—Valves appear normal; walls flabby and pale. Upon the surface of left ventricle was a place much resembling an infarction, pale, soft, easily disintegrated, and so much attenuated that the ventricular wall at that place was not more than one line in thickness. The cardiac vessels were examined, but no abnormalities found. The foramen ovale was patent, an aperture about four lines in diameter existing. An attempt seems to have been made to render this opening valvular in character, but when submitted to hydrostatic test this condition was found but imperfectly accomplished.

Aorta.—Was throughout its entire extent in the early stage of chronic arteriitis.

Liver.—Enlarged, fatty, and waxy.

Spleen.—Capsule thickened, soft, almost diffluent, and intensely congested.

Kidneys.—Small, capsule adherent, nodular; numerous cysts upon the surface. Cortex atrophied; many tubes occupied by urates. Cysts scattered throughout cortex and pyramids. Tubes fatty; vessels of pyramids and Malpighian bodies were waxy.

Bladder.—Normal.

Stomach.—Chronic gastric catarrh.

Intestines.—Present the shaven beard appearance; lower portion of jejunum, the ilium, colon, and the rectum, mucous membrane injected; few small submucous hemorrhages; follicles prominent.

Uterus and appendages.—Large, recent corpus luteum in right ovary; uterus large and congested; mucous membrane of body and cervix intensely congested; a few cicatricial bands at the internal os very much narrowing it, and making it difficult to guide a director into the cavity of the body of the organ.

ABSCESS OF BRAIN—CARIES OF BONES OF MIDDLE EAR—PACHYMENINGITIS—A NEW INSTRUMENT FOR PERFORATING MASTOID CELLS.

DR. H. D. NOYES.—Patrick Boylan, æt. 45 years, died August 10, 1873; ward 16: male.

Ante-mortem History.—The patient was admitted May 26, 1873. Received an injury upon side of head three weeks before admission. Complained of severe pain in the ear. After admission had *otitis media*, which soon spread to the mastoid cells. Professor Noyes made an opening into these cells, and allowed the escape of pus. Improvement for a month, when brain symptoms made their appearance. Died August 10, 1873, after being comatose several days.

Post-mortem History: Exterior.—Autopsy made by Dr. Maxwell twenty-nine hours after death: Body large, moderately nourished; rigor mortis marked. An opening about one inch long, parallel with, and about one-fourth inch behind the ear. Both ankles show old fracture; left fibula one and a half inches from malleolus, united at an angle; inner malleolus of right prominent.

Head.—Calvarium normal. Upon exposing the surface of the brain, the vessels of the pia mater were seen destitute of blood; convolutions markedly flattened. The brain was flabby; an abscess opened into the left middle lobe, giving exit to a considerable quantity of thick, greenish pus. Throughout the whole

left hemisphere, at the base, was marked pachymeningitis, and a small, oblong, yellowish-white growth attached to the dura mater, over the outer part of petrous portion of temporal bone. Over this region the membrane was loosened from the bone, and small, scattered growths present. Section of the brain showed pus breaking into the lateral ventricles, destroying the septum lucidum, and entering lateral ventricle of other side (right). The brain bordering it was superficially softened. The primary abscess was situated beneath outer and posterior border of left thalamus opticus. The whole middle lobe and posterior portion of anterior, and anterior portion of posterior lobes—same side—almost diffluent, and everywhere the brain-substance was pale and flabby. The petrous portion of temporal bone was removed, and found extensively carious internally; the outer half of inner surface irregular, with several small perforations. Externally—outer surface—the bone showed the perforation made by operation two months ago.

Other organs not examined, friends objecting.

In referring to the operation, Dr. Noyes remarked that he had great difficulty in obtaining a proper instrument, and finally resorted to the use of the pin of a trephine with excellent result. He thought this instrument was peculiarly adapted to such cases, inasmuch as its shape prevented its penetrating the bone farther than necessary; that its edges cut sufficiently well, and the opening which it made was large. Next to this instrument, he thought that a carpenter's reamer might answer an excellent purpose, especially in an emergency.

Aside from the method of operating in this case, the case itself was interesting as showing how long brain symptoms last, and how serious the lesions may be and yet the patient live for the considerable period which elapsed from the time that Dr. Noyes completed his term of service at the hospital, July 31, 1873, up to the time of death.

Dr. Crosby remarked that he had perforated the mastoid process three times. The first case occurred eight years ago. A lady, while on the summit of Mt. Washington, N. H., was suddenly seized with a severe pain in the ear. She was taken to one of the mountain houses, where she suffered more or less for a month, at the end of which time she had a slight discharge of pus from the ear. Dr. C. saw her shortly after this occurrence, and found her with dizziness, headache, and some disturbance of vision. In that case an opening was made into the mastoid cells by means of a gimlet, with good success. The ease with which the operation was performed in this case impressed him with the belief that the gimlet was the best instrument. The second case occurred near Crawford's. A laboring man was attacked with severe inflammation of the ear. Shortly after the attack he proceeded to consult his attending physician; the latter, who knew him well, noticed that he was very unsteady in his gait, and that he was evidently suffering very severely. On examining the patient he discovered inflammation of the mastoid cells. The patient being some distance from home, was sent thither at once; at the same time Dr. Crosby was asked by telegram to see him at once on his arrival. Dr. C. saw him at 1 A.M. the following day. The symptoms were so alarming that he decided to perforate the mastoid at once, which he accordingly did, after placing the patient under ether. The opening was made with the gimlet, when the pus jetted two inches from the wound. All the urgent symptoms were relieved immediately, and the patient made a rapid recovery.

The third case occurred in a medical gentleman, who, on his way from New York, took a severe cold, as the result of which he had an attack of otitis media. This gentleman having heard of Dr. Crosby's cases, telegraphed to him to come and see him. The symptoms were very alarming, the patient complaining of vertigo, and a sensation as though the bed was sinking from under him. His pulse was rapid, tongue dry, and there were other symptoms pointing toward pyæmia. Contrary to the wishes of a medical friend who was present with the patient, Dr. Crosby perforated the mastoid, and apparently, much to the gratification of said medical friend, no pus was discovered. In the course of twenty-four hours afterwards, pus did escape through the opening make by the operation. The patient ultimately recovered, but the symptoms of vertigo and the sensation of sinking, with sympathetic nausea, remained for a long time.

The medical friend in attendance upon this physician-patient soon after had a similar case. As in the former instance, he did not deem perforation necessary, consequently it was not done. Dr. C. afterwards learned that the whole mastoid process of this patient exfoliated;—certainly bad for the patient, but good for the doctor, who refused to have the necessary operation to prevent this result.

Dr. Noyes remarked that Dr. Crosby's gimlet cases were classical, but he should rather object to the gimlet in all cases, as it might with its sharp point penetrate too far.

Dr. Crosby. It is necessary to know how to use it, and if one knows the anatomy of the parts and exercises due care, no accident need occur.

Dr. Noyes stated that that very matter came up before a recent meeting of the Ophthalmological Society. One of the members of that Society stated that he had examined seven skulls with reference to the anatomical relations of the lateral sinus to the mastoid process, and in all had discovered such thinness of the bony plate, and such a sharpness of curve of the said sinus, as to render it impossible to perform perforation with a sharp instrument without great danger of penetrating too far.

Dr. Putnam thought that inasmuch as in Dr. Noyes's case pus had found its way into the ventricles, that hemiplegia and convulsions ought to have occurred.

Dr. Loomis referred to a specimen of abscess of brain, commencing with caries of the skull, in which pus invaded the ventricles on the affected side, and in which there were no evidences of paralysis.

RECTO-VESICAL FISTULA IN A MALE.

Dr. Erskine Mason exhibited a specimen of recto-vesical fistula occurring in a man. The patient, aged 27, had enjoyed excellent health until April, 1871, when one night he was seized with pain in the bowels, the whole surface of the abdomen becoming tender, and, according to his account, his bowels were swollen. He was under the care of a Homœopathic practitioner, who told him that he was suffering from peritonitis, for which he gave large injections of castile soap and water, together with five cathartic pills "to move the bowels."

This attack of sickness lasted nine weeks, during which time the patient became very much emaciated. He then resumed his occupation as clerk, and continued at it until Oct., 1871, when he had to cease on account of chills and fever.

In March, 1872, he began to have constant pain over the region of his bladder, attended with diarrhœa, loss of appetite and strength. About this time he came under the care of Dr. Gillette, who very properly diagnosticated ulcerated rectum, and gave the appropriate

treatment. Not long after this the patient passed wind through the urethra, and shortly after, fæces.

Dr. Mason first saw the patient in March, 1873, and found him in a most deplorable condition, passing more or less fæcal matter through his urethra, and at times unable to void urine at all. Urine would also pass per rectum. For the relief of pain he had been accustomed to take immense quantities of laudanum. Dr. Mason suggested the propriety of performing lumbar colotomy, with the view of diminishing the flow of fæcal matter into the bladder. Agreeing to have the operation performed, he was sent to the hospital March 3d. Before he had been in the institution three days his symptoms began to improve wonderfully, his urine commenced to pass clear, and he felt so much encouraged that he left without an operation, and inside of two weeks after admission. He went to the country and continued to improve for a while. Returning from the country, after a fortnight's absence, he was in good condition, and he was advised to have the operation performed at once. He had some business which he wished to settle before he should submit himself to treatment, and the consequence was, he lost a good opportunity. He was not seen again until May 1st following, when Dr. Mason was sent for. The suffering of the patient was then intense; he was writhing in his efforts to pass even a drop of water, the bladder being evidently filled with fæcal matter.

For the purpose of having the operation performed the patient was sent to Roosevelt Hospital. He was admitted May 9th. There was then but little hope for him; but as the operation was the only means to afford even temporary relief from suffering, it was accordingly performed.

The operation was performed May 12th. The patient did nicely until the 24th, when he was seized with his old attack of chills and fever. This subsided, however, under the use of quinine, but his condition was too feeble to allow him to rally, and he finally sank and died June 3d, just twenty-two days after the operation. From the moment the colon was opened, fæcal matter ceased to enter the bladder.

At the autopsy the intestines were found bound down in the pelvic cavity. There was a large opening, about the size of the index-finger, opening from the rectum into the bladder. The bladder itself was much thickened, its mucous membrane almost destroyed by ulceration, and the denuded surfaces covered with diphtheritic membrane. There was, besides, an abscess in the prostate. All the other organs of the body were healthy, with the exception of the lungs, the apices of which were seats of the deposit.

Dr. Mason, in speaking of the rarity of the case, remarked that his was the twelfth upon which colotomy had been performed for the relief of recto-vesical fistula in the male, and his case was the shortest time of survival after the operation. The longest time was three years.

Dr. Noyes asked if there was any choice as to the side upon which the operation should be performed.

Dr. Mason said that, with the exception of one case, the operation had always been done upon the left side.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Adjourned Annual Meeting and Stated Meeting, Nov. 24, 1878.

Dr. Ellsworth Eliot, President, in the Chair.

The minutes of the annual meeting and of the adjourned annual meeting were successively read and approved, and on motion the annual meeting was adjourned *sine die*.

Immediately thereafter the stated meeting was opened and the Society called to order.

NEW MEMBERS.

The following gentlemen having been duly recommended by the Comitia Minora, were granted certificates of membership:—

David B. Hunt, 48 W. 36th st., a graduate in medicine at the Col. of Phys. and Surg., Med. Dept. of Columbia Col., in 1870; John G. Curtis, 35 W. 33d st., a graduate in medicine at the Col. of Phys. and Surg., Med. Dept. of Columbia Col., in 1870; Thomas A. McBride, 47 W. 27th st., a graduate in medicine at the Col. of Phys. and Surg., Med. Dept. of Columbia Col., in 1871.

STANDING COMMITTEES.

The President announced the following standing committees for the ensuing year:—

Library Committee.—Drs. C. A. Leale, *Chairman;* J. G. Frazer, T. H. Holgate.

Committee on Intelligence.—Drs. F. A. Castle, *Chairman;* L. D. Bulkley, D. C. Carr, W. H. Katzenbach, R. J. McKay, P. B. Porter, Isaac Adler, Eugene Penguet, Mary Putnam Jacobi.

Committee on Diseases.—Drs. Charles P. Russel, *Chairman;* George Bayles, A. B. De Luna, Geo. H. Humphreys, T. H. Kellogg, J. V. S. Wooley, Gouverneur M. Smith; and the members of the *Meteorological Committee*, viz., Drs. D. H. Goodwillie, J. W. S. Arnold, R. P. Lincoln, A. B. Judson.

Committee on Finance.—Drs. J. E. Janvrin, E. Bradley, H. P. Farnham.

Committee on Hygiene.—Drs. Moreau Morris, *Chairman;* E. H. Janes, Charles P. Russel, S. A. Raborg. [Three vacancies.]

PRESIDENT'S ADDRESS.

The President remarked that he would not occupy the time of the Society with any set address, as he thought it would be better employed in scientific work; but he wished to thank the members for the great honor again conferred on him.

The Society should congratulate itself upon the success of the past year, over fifty new members having signed its roll during that period. Within the same time the Society had lost, by death, the following members:

Drs. James L. Brown, T. Conant Foster, G. Michelena, Josiah C. Nott, Lewis Tice, Gilbert Totten, Samuel Blois, and A. Clarke Corson.

Another cause for congratulation was, that the past year had been one of peace, the Comitia Minora having had no cases of breach of ethics before it. Difficulties may have occurred, but they have been settled amicably by the parties themselves.

The President also remarked that, so far as lay in his power, the time of the Society should be entirely devoted to science. He referred, moreover, to the pleasant relations sustained with other societies, and hoped to see their officers always present on the platform during the meeting of this Society.

PAPER OF THE EVENING.

A paper was read by Dr. Herman Knapp on "Ophthalmoscopic Optometry," and a discussion followed on the part of Drs. Noyes, Loring, Roosa, and Knapp, relative to the subject of optometry and the history of certain improvements in instruments for this purpose.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 4, 1873.

DR. AUSTIN FLINT, PRESIDENT, in the Chair.

THE paper for the evening was read by Dr. F. P. Foster, upon

PROPOSITIONS IN REGARD TO ANIMAL VACCINATION.

The remarks which the speaker submitted did not assume the form of a regularly prepared paper, but were presented in the form of propositions, and certain statements in connection with these, which were regarded as essential considerations in connection with the subject of animal vaccination.

The first proposition submitted was as follows:—"Vaccination of the human subject with animal vaccination is attended with a degree of success, as regards the protection of vaccination, equal to that obtained by any other method of vaccination."

The success which has been obtained in England, where the method of vaccination from arm to arm is generally employed, and reported in one of the Blue Books published in the year 1857, has reached $96\frac{64}{100}$ per cent. of all the cases vaccinated. The whole number reported was 132,303. Could animal vaccination give any such result as this?

There has been a common opinion in the minds of the profession until very recently, and perhaps to a wide extent still entertained, that such results cannot be obtained by animal vaccination. This opinion may have been founded upon reports made, particularly by English observers, upon this subject, for their reports have been decidedly unfavorable to this method of vaccination. The report made by Dr. Seguin, claiming to present the view taken of the subject in several cities upon the continent, and among them the city of Brussels, stated that success with animal vaccination was very poor indeed, even when conveying the vaccine disease from *one animal to another;* that they were able only to convey it through a series of some half-dozen animals, and then were obliged to obtain a new supply of material for further operation. The speaker was of the opinion that the performance of experiments without obtaining better results than those reported,—they being likewise dependent upon foreign sources for supply of material,—such results could not be fairly held up as a picture of what animal vaccination can accomplish.

During the past three years Dr. Foster has had the opportunity, in connection with the Vaccine Department of the New York Dispensary, to institute and maintain an animal-vaccination service, and he has become cognizant of many thousands of cases during that time. His observations have not been confined to the city of New York alone, but have extended to Boston, Baltimore, and Buffalo. From these cities he presented reports upon 78,176 cases in which bovine lymph had been employed. The results obtained in primary vaccination were generally as follows: In one district 4,793 cases were vaccinated; inspected, 4,322; successful, 4,322; 100 per cent. success. In one district $98\frac{73}{100}$ per cent. of cases inspected were successful. In one district $99\frac{53}{100}$ per cent. of cases inspected were successful. In this city equally satisfactory results have been obtained as in the other cities mentioned, and in all cases a success equal to any which has been obtained when humanized lymph has been employed, whether the vaccination has been primary or secondary.

The second proposition was: "The vaccina produced by animal vaccination is genuine, and is as thoroughly protective against small-pox as the protection obtained by the use of any other form of vaccination." The question of protection against small-pox involves two considerations, namely, cases in which small-pox has occurred after using the vaccine matter, and cases in which it has protected individuals exposed to small-pox. With regard to the first, I know of only one case where small-pox occurred after using the lymph furnished by the New York Dispensary. It would not be surprising, however, that cases should occasionally occur. For after any form of vaccination small-pox does occasionally occur. This fact was well known before animal vaccination was instituted; indeed, small-pox itself may occur a second time. French authority was cited in proof of these points.

Dr. De Paul, who introduced animal lymph, has carried his experiments so far as to vaccinate a child, who had been previously vaccinated with animal lymph, with the virus of small-pox, and without communicating the disease to the child. In several instances he reports cases where children who have been vaccinated with cow-pox only, have remained with impunity when one or more variolous patients were in the beds.

The third proposition was: "The use of animal vaccine does not entail the dangers of severe local inflammatory affections, or general febrile complications generally attributed to it by some writers. The dangers or complications are rare. Some unfortunate results have been reported relative to subsequent erysipelatous affections; but the same results have been realized from the use of other virus, and does not hold against animal vaccine alone.

The fourth proposition was: "Animal vaccine, as equal with humanized vaccine, is capable of preservation for a considerable length of time, for transmission to remote parts."

I know perfectly well that, with reasonable limits, the length of time which the animal vaccine can be preserved should be the very least estimate with regard to its liability to produce the vaccine disease. Indeed, I prefer dried lymph, which has been tried and found successful, to that which is much fresher, but which has not been tested. The circumstances under which a calf was vaccinated with matter which had made a double trip across the Atlantic, and had been kept some days after its return, were related. The result of the vaccination was successful in four out of six insertions. The animal vaccine has been sent to Panama, Japan, and other parts equally remote, and successful results have been obtained by the use of the matter after its arrival.

In the case of crusts there is an apparent exception to the truth of the proposition which I have laid down; but crusts are not to be regarded as proper material, so that essentially there is no objection to the statement upon that ground.

The fifth proposition was: "The use of animal vaccine eliminates one of the suspected elements of causing syphilis, and helps to silence the anti-vaccine agitations."

The sixth proposition was: "Animal vaccine is the most trustworthy safeguard for the supply of material in emergencies." In the discussion which followed the reading of the paper,

DR. FINNELL remarked that he regarded one good vaccination as a life-long protection to any individual.

DR. ELLIOTT remarked that his experience in the use of calf, matter entirely corroborated the statements made by the author of the paper. He employs it without hesitation, and has had no failures as yet.

DR. LEAMING mentioned a number of cases which had come under his own observation, where individ-

uals had had varioloid after an apparently perfect vaccination. He also called attention to reports which had been made from the Prussian army upon 51,637 cases of vaccination and revaccination, in whom there were perfect cicatrices, imperfect cicatrices, and entire absence of cicatrices, and in which 64 per cent. were successful. The Doctor urges revaccination as much as possible, basing his recommendation upon such reports and his own experience, believing that only one-third, or one-fourth of the cases are protected for life by the first vaccination. By vaccination and revaccination, until it does not take at all, small-pox may be stamped out, and by the use of animal virus it would be a very easy matter to carry the proposition into effect.

Dr. O'Sullivan regarded it probable that good success could be obtained with either animal or humanized vaccine; and that, in a great majority of cases, one vaccination probably is sufficient. Still, when epidemics are prevailing, it would be prudent to revaccinate, for the reason that revaccination is to be regarded as the only sure test of protection. The Doctor expressed himself emphatically that some unity of action should be taken by the profession in general, relative to giving assurances to the people that there is a protection from small-pox, for such assurance might materially aid in overcoming the prejudice against vaccination, so strong and prevalent in many quarters, especially in large cities.

Dr. Caro remarked that he had always employed humanized lymph in vaccination, and with uniform good success. Upon the 6th of Nov. he applied to Dr. Foster for lymph, and vaccinated a child upon the following day. The reason for vaccinating that child with bovine lymph was as follows: He had vaccinated a child in the same family some time previously, and the pustule had pursued its usual course properly, but when the scab was removed it did not cicatrize well, and left an awkward ulcer. There was no poison in the lymph used, because other persons had been vaccinated with the same material, and no unpleasant results had followed. To convince the parents, however, that the lymph employed in the vaccination of another child was perfectly pure, he had secured some bovine lymph of Dr. Foster, and when he saw that child about seven days after he had performed the vaccination, it was suffering from varioloid in a moderate form, and the parents, as a matter of course, were very angry. The Doctor did not regard his case, however, as a test case for the efficacy of the bovine lymph, but simply regards both of his unfortunate cases as illustrations of what may occur, probably independent of vaccination, in consequence of a peculiar condition of the system, or the operation of some germ-influence, which is developed without reference to vaccination.

Dr. Caro was also of the opinion that there is no necessity for revaccination. It is the custom in *Sicily* to vaccinate at three points in the arm at the first vaccination, and a case of small-pox occurring in an individual who had been thus vaccinated, never had been known upon that island. He had passed through severe and long-continued epidemics, and taken his children with him, who had been vaccinated in this manner, and none of them had taken the small-pox. He does not object to revaccination, but does not regard it as being absolutely necessary. With regard to communicating disease from one patient to another by this means, I have made some experiments, and am fully convinced that it is not possible. I have vaccinated persons from the arms of persons having syphilis, both in its secondary and tertiary forms, without producing any evil results. If the lymph is taken pure, and without blood, there is no reason why it should prove injurious in the way of communicating disease from one person to another.

Dr. Janes remarked that he coincided with the author of the paper with regard to ridding ourselves of the *liability* of including syphilis or other diseases in performing vaccination by means of animal lymph; but at the same time, when humanized virus is properly taken, the cases in which diseases are included are very rare.

Concerning the relative success of different kinds of lymph, his experience had taught him that this may be materially modified, in reports, by the fact that there are comparatively but few good vaccinators. This is especially liable to be the case in large cities, where large numbers of cases are collected forming bases of reports. In very many instances inexperienced persons are employed to perform vaccination, and the results obtained from such labors may be prejudicial against the success of any kind of material employed.

Dr. Foster remarked that he did not regard the results following the vaccination in Dr. Caro's case as being due to the vaccination. The child, perhaps, had been exposed to the effluvia of small-pox before or after the vaccination, and that would account for the appearance of the eruption.

Dr. Caro remarked that all he knew of the history of the case was that the child was in perfect health at the time of the vaccination.

Dr. Lusk remarked that, prior to eighteen months ago, he had been, both from reading and experience—and he saw the first calf brought to Paris for the purpose of introducing animal vaccination—unfavorably impressed with regard to the use of animal lymph. Since that time, however, his success in the use of animal lymph had been entirely different from anything he had previously obtained, and in both primary and secondary vaccinations his success has been absolutely complete. His experience warranted him in saying that revaccination might be successful in those persons who carry perfect scars, and he has also seen persons who had been attacked with varioloid, when there were evidences that a former vaccination had pursued a proper and satisfactory course, leaving perfect scars.

Correspondence.

EPISCLERAL MELANOTIC SARCOMA.

To the Editor of The Medical Record.

Sir:—In the issue of your valuable journal for November 15th, occurs a report of the presentation before the New York Pathological Society, by Dr. H. Knapp, of a case of episcleral melanotic sarcoma. Its interest and value as a specimen depended (as Dr. K. remarked) upon its extreme variety, he never before having seen it in a living subject or in any anatomical collection. His successful treatment in nowise lessens the interest of his report of the case, and reflects credit both upon his skill and the resources of our art in subduing a disease so fatally malignant.

This premises the object of this communication, which is to place on record another instance of this disease, which in history, characteristics, treatment, and results, remarkably and almost completely resembles that of Dr. Knapp's.

Mr. K., aged fifty, of robust constitution, some six years ago first felt a slight pain in his right eye. He then attributed it to a cinder from a locomotive, re-

ceived while riding in a railway-car. No such substance, however, could be discovered. Upon examination, some months later, I found upon the upper and inner margin of the cornea a dusky sub-conjunctival growth extending upwards and towards the inner canthus. From its slight extent, and at that time seemingly trifling nature, it was judged that an application of solid nit. argenti would suffice for its removal. This treatment resulted only in the discovery that a removal of the growth followed each application, and that the disease was really advancing. I then advised that Dr. Asa Horr, of Dubuque, Iowa, be consulted. After careful examination, Dr. Horr attempted its removal by the knife. The same results again followed. In spite of the most careful and repeated dissections, it was found that the growth was slowly but surely extending. This plan was then abandoned, and the malignant nature of the disease (before suspected) now became quite apparent. The patient was now advised that extirpation of the globe was the only resource. At this time the tumor was quite dark, of a wedge shape, the thicker portion overlapping the cornea from the upper border so as to preclude vision. Aside from its history and color, it bore a resemblance to a pterygium. Numerous practitioners failed to make a satisfactory diagnosis, and the case acquired a considerable local notoriety from its unique character. At this period, by the advice of a friend, the patient placed himself under the care of a distant surgeon, who extirpated the globe. Some months after his return, my attention was called to a small bluish tumor, of the size of a grain of corn, hard to the touch, and situated upon the inferior surface of the supra-orbital plate. This was at once removed, and a thorough destruction made by caustic of the adjacent tissues. Nearly a year has now elapsed, and a complete cure seems assured. There can be no doubt of the identity of the disease described by Dr. Knapp and the one here reported. In fact, with little modification, Dr. K.'s description would apply to my case. In view of its malignant character, its disinclination to invade the deeper tissues of the globe is, perhaps, worth noting. The result also verifies the opinion of the distinguished oculist who reported its duplicate, viz., that enucleation is the only method of insuring the safety of the patient, and that delay is fraught with danger.

H. C. MARKHAM, M.D.

Medical Items and News.

PROF. LOUIS J. R. AGASSIZ, the distinguished savant, died in Boston, Mass., December 14, 1873, in the 67th year of his age. He was born at Orbe, in Waallande, May 28, 1807. He studied at the gymnasium at Biel, afterwards at the Academy of Lasanne, subsequently at Heidelberg and Munich, where he obtained the degree of doctor of medicine. In 1839 he published a work on the Natural History of the Fresh-water Fishes of Europe, also Researches in Fossil Fishes, descriptive of Echniodermes. His studies of the Glaciers, wherein he promulgated a new theory, did more to make his reputation as a scientist than any other of his productions. For some years he filled a chair in the scientific department of Harvard University.

In 1865 Prof. Agassiz organized an expedition to Brazil, for the purpose of examining the valley of the Amazon, obtaining further evidence in regard to his glacial theory, and obtaining specimens and information. The expenses of this expedition, which comprised some eight or ten persons, were defrayed entirely by private liberality. The success of Agassiz during this expedition was unbounded. Hundreds of new varieties of fish were discovered and specimens obtained. His reception by the Emperor of Brazil, himself a very scientific man, was flattering in the highest degree.

In the latter part of 1871, Prof. Agassiz, with the aid of some wealthy students of science, equipped an expedition for the purpose of examining the constitution and character of the ocean bottom. The work of investigation was continued until July, 1872. Subsequently Mr. Anderson presented him with the island of Penikese, on which to found a school of natural history, which school has now suffered such an irreparable loss in the untimely death of its master.

DR. W. C. ROBERTS, Vice-President of the New York Academy of Medicine, died in New York Dec. 9, aged 64.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from December 5, 1873, to December 18, 1873.

GHISELIN, JAMES T., Surgeon.—Granted leave of absence until June 6, 1874; and his resignation accepted to take effect June 6, 1874. S. O. 245, A. G. O., Dec. 10, 1873.

BAILY, JOSEPH C., Surgeon.—Relieved from duty in Department of California, to proceed to Baltimore, Md., and, on arrival, report by letter to the Surgeon General.

CALDWELL, D. G., Assistant Surgeon.—Assigned to duty at Fort Griffin, Texas. S. O. 222, Department of Texas, Dec. 6, 1873.

DE WITT, C., Assistant Surgeon.—Granted leave of absence for four months. S. O. 241, A. G. O., Dec. 4, 1873.

KIMBALL, J. P., Assistant Surgeon.—Assigned to duty at Fort Randall, D. T. S. O. 266, Department of Dakota, Nov. 28, 1873.

CAMPBELL, A. B., Assistant Surgeon.—To report in person to the Commanding General, Department of Texas, for assignment to duty. S. O. 247, A. G. O., Dec. 13, 1873.

PATZKÉ, J. H., Assistant Surgeon.—Assigned to duty at Fort Fetterman, Wyoming Territory. S. O. 182, Department of the Platte, Dec. 3, 1873.

New Publications.

BOOKS RECEIVED.

MEDICAL LEXICON: A Dictionary of Medical Science, containing a concise explanation of the various subjects and terms of Anatomy, Physiology, Pathology, Hygiene, Therapeutics, Medical Chemistry, Pharmacology, Pharmacy, Surgery, Obstetrics, Medical Jurisprudence, Dentistry, etc., with the accentuation and Etymology of the terms and the French and other Synonyms. By ROBLEY DUNGLISON, M.D., LL.D., late Prof. Inst. Med., etc., Jefferson Med. Coll. A new Edition, enlarged and thoroughly revised by RICHARD J. DUNGLISON, M.D. Phila.: H. C. Lea, 1874.

VICK'S ILLUSTRATED FLORAL GUIDE FOR 1874. James Vick, Rochester, N. Y.—One of the evidences of the progress of the times and of the vast scale on which business is carried on in these days, may be seen in the costly elegance with which trade catalogues are now gotten up, and Seedsmen and Florists excel in the good taste they display in this line, and prominent among them is the annual above named.

Original Lectures.

INFANTILE SPINAL PARALYSIS.

A LECTURE DELIVERED AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.*

By E. C. SEGUIN, M.D.,
NEW YORK.
(Reported by FRANK P. KINNICUTT, M.D.)

GENTLEMEN:—I think that you may obtain a clearer idea of the importance of infantile spinal paralysis if we study it not separately, as I had at first purposed we should, but as one of the forms of paralysis to which infants are liable. At a subsequent meeting we can briefly inquire into the other varieties of infantile palsy, and you will then obtain a knowledge of a great part of the nervous pathology of infancy, and be better prepared to diagnose the most important of these affections—infantile spinal paralysis. The period of life termed infancy is that which includes the first dentition to the beginning of the seventh year. The pathology of this stage of existence is treated of separately by authors, in part because of the peculiar difficulties in diagnosis presented by children of this age, and in part because of numerous peculiarities they exhibit, such as susceptibility to the action of causes of disease, of medicines, and the exaggeration of certain groups of symptoms, such as the spasmodic element in the sphere of the nervous system. There is no essential difference, please remember, between infants and adults in the nature, course, and treatment of disease.

The following synopsis represents the principal forms of paralysis which are likely to occur in infancy, together with their leading pathogenetic factors:

PARALYSIS IN INFANCY.

1. HEMIPLEGIA (clot, injury, embolism, tumor in brain).
2. PARAPLEGIA (injury, clot, inflammation of cord).
3. PERIPHERAL PARALYSIS (compression, etc., of nerve-trunk).
4. INHIBITORY PARALYSIS (peripheral irritation).
5. INFANTILE SPINAL PARALYSIS (atrophy of motor nerve-cells).

The last of these is the disease we shall study to-day, and several examples of it are before you, affecting subjects of different ages. The term which I have adopted is one of numerous synonyms by which the disease has been known. The first systematic writer upon the subject, Heine, used a corresponding German name, *spinale Kinderlähmung*, in his second edition of 1860. French writers upon the diseases of infancy, who studied the subject very thoroughly in its clinical aspects, Rilliet and Barthez,† denominated the disease *paralysie essentielle de l'enfance*. Bouchut, entertaining a very singular notion of the pathology of the affection, gives it the name of *paralysie myogénique*. Niemeyer retains the term essential paralysis, considering it as a safe one to adopt during the present unsettled state of opinion upon the question of pathology. The word *essential* is used by these authors as equivalent to functional, or *sine materia*. The title infantile paralysis is one employed by such authors as C. B. Radcliffe and Adams. Duchenne, in the last edition of his work on electrization, calls the disease *paralysie atrophique de l'enfance*, instead of *paralysie atrophique graisseuse de l'enfance*, as in his edition of 1860. Hammond, in his treatise upon Diseases of the Nervous System, speaks of organic infantile paralysis.

* On Nov. 8th, 1873.

† Rilliet et Barthez, Maladies des Enfants, t. II., p. 545 et seq. Paris, 1861.

SYMPTOMS AND COURSE OF THE DISEASE.

In brief, infantile spinal paralysis may be defined as an acute febrile affection, resulting in generalized paralysis, which shortly disappears from all but a limited part of the body, where the akinesis persists indefinitely without impairment of sensibility, is accompanied within a few weeks by atrophy of the palsied muscles, and is followed later by various deformities,—the result of altered balance of power at certain joints. The anatomical lesion of the disease consists in primary (?) atrophy of the nerve-cells of the anterior horns of the spinal cord (motor tract), and in secondary (?), complicating (?) myelitis.

There are three quite distinct stages in the course of infantile spinal paralysis.

(*a*) *The Febrile Stage.*—A child, and usually a healthy or even a robust child, has an indisposition, with febrile movement, evidenced by restlessness or drowsiness, hot skin and frequent pulse. The mother's attention is often called to a co-existing local affection, such as indigestion, intestinal catarrh, or morbid dentition. The last is the usual condition referred to, because the age when infantile spinal paralysis is most apt to occur (six to twenty-four months) includes nearly the whole period of dentition, and because mothers as well as many practitioners are only too willing to hold the teeth responsible for any disease which may arise during their evolution. The fever has not, to my knowledge, been studied with the thermometer. Fever has been observed in nearly all cases * (forty out of fifty). When parents assert that no fever was present at the outset, it must be borne in mind that a certain degree of intelligence is required to enable a person to recognize fever; that in some cases only skilled observations (thermometrical measurement) will reveal its existence; and that it may have been present for a few hours only. Besides these phenomena, there are several nervous symptoms present in a certain proportion of cases, convulsions usually not involving the facial muscles, and delirium. Hyperæsthesia is also present; but whether this is a true hyperæsthesia, or an evidence of that morbid sensitiveness which is part of the febrile state, remains uncertain.

(*b*) *Stage of Paralysis.*—As the fever subsides, the mother, upon handling the child, discovers that voluntary motion has been lost in nearly the entire body. The exact period when the akinesis appears, and whether it develops slowly or suddenly, are points not yet investigated. The paralysis is at first generalized, often involving all the limbs, very rarely the face. At the same time no impairment of sensibility is to be noted. In a short time, a few hours, the paralysis recedes from some parts and persists in others; it being very rare that more than one-half of the body remains palsied. This retrocession of the paralysis, its disappearance from some limbs, and fixation upon one or two, or upon unsymmetrical distant muscles, is highly characteristic of the disease—I might almost say pathognomonic. This fixation is usually upon parts of the lower limbs, more seldom upon the upper, and rarely upon parts of the trunk. In only one case has a muscle of the head been found definitely paralyzed—the temporal. The muscular group which is most often affected is the anterior tibial and peroneal. Owing to the immunity of the abdominal muscles, the bladder and rectum perform their functions.

* Laborde. De la paralysie (dite essentielle) de l'enfance. Paris. 1864, p. 8.

CASES OF INFANTILE SPINAL PARALYSIS.

No.	Date.	[Author.]	Age at Onset.	Age at Autopsy.	Mode of Onset.	Parts Paralyzed.	Lesions of the Nervous System.	Lesions of Muscles.	Bibliography.
1	1825	Hutin	7	49	Convulsions	Both legs	Atrophy of lower end of cord, and of its nerve-roots.	Not stated	Cited by Heine, Spinale Kinder-Lähmung, p. 151, 1860.
2	1842	Longet	..	8	Not stated	Right leg	Atrophy of roots of right sciatic nerve	Idem	Longet, Anat. et Phys. du Système Nerveux, I., p. 358. Paris, 1842.
3	1849	Fliess	..	..	.....	Upper extremities	Congestion of meninges over cervical enlargement of cord.	Idem	Cited by Laborde, Paralysie de l'enfance, p. 118. Paris, 1864.
4	1850	Billiet et Barthez	..	..	.....	One arm	None. (Microscope not used.)	Idem	Gazette Méd. de Paris, 1850, p. 651.
5	1850	Idem	..	..	.....	Both legs	Idem. (Idem.)	Idem	Idem.
6	1855	Behrend	1	5	.....	Right lower extremity	Chronic spinal meningitis	Fibres small; not fatty	Cited by Heine, op. cit., p. 150.
7	1863	von Recklinghausen	..	..	.....	Both legs	Tubercles in cord	.....	Deutsche Klinik, 31 jan. 1863.
8	1863	Cornil	2	49	Unknown	Idem	Amyloid degeneration and atrophy of white columns of cord.	Fibres fatty	Gazette Méd. de Paris, 1864, p. 290.
9	1863	Bouvier	1	2	Idem	All limbs	Sclerosis of antero-lateral columns of cord	Fibres very small and granular; not fatty.	Cited by Duchenne fils in Archives Gén. 1864, II., p.205-9.
10	1863	Henri Roger	..	..	Idem	Not stated	Idem	Not stated	Idem.
11	1864	Laborde	8mo	2	Febrile	Both legs	Sclerosis of antero-lateral columns of cord; cells normal.	Fibres small; not degenerated.	Laborde, op. cit., p. 104.
12	1864	Laborde et Cornil	1	2	Idem	Idem	Cortical sclerosis of cord; sciatic neuritis; cells normal.	Fibres small and granular; not fatty.	Idem, p. 109.
13	1865	Prévost	..	78	Unknown (infantile?)	Left lower extremity	Atrophy of cells of left anterior horn of cord; atrophy of left antero-lateral column.	Fibres fatty	C.-R. Soc. de Biologie, 1865, p. 215.
14	1866	Echeverria	3	10	Febrile	Right limbs	Cells of anterior horns filled with granular pigment; diffused myelitis.	Fibres granular; not fatty	Echeverria, On Reflex Paralysis, p. 29. New York, 1866.
15	1866	Idem	2	2½	Febrile diarrhœa	Both legs	Nerve-cells granular; diffused myelitis; nerves shrunken.	Fibres fatty	Idem, p. 33.
16	1867	Wm. A. Hammond	..	..	Palsy of 4 yrs. standing.	Left lower extremity	Small clot in cord	Not stated	Journal of Psychological Med., 1867, p. 51. New York.
17	1868	Lockhart Clarke	1	32	After cow-pox inoculation	Upper extremities	Atrophy of nerve-cells of anterior horns of cervical enlargement; central myelitis.	Idem	Med. Chir. Trans., vol. LI., p. 249. London, 1868.
18	1870	Charcot et Joffroy	7	40	Sudden, non-febrile	All limbs	Atrophy of cells of anterior horns; atrophy of antero-lateral columns; slight myelitis.	Fibres small, but not degenerated.	Archives de Phys., 1870, p. 135. Paris.
19	1870	Parrot et Joffroy	..	3	Unknown	Left lower extremity	Atrophy of cells of left anterior horn; atrophy of left antero-lateral column, and nerve-roots.	Idem	Idem, p. 310.
20	1870	Vulpian	..	69	Idem	Right lower extremity	Atrophy of cells of right anterior horn; some sclerosis of white columns.	Fibres small; striated; finely granular (fatty?)	Idem, p. 316.
21	1871	Roger et Damaschino	1½?	2	After dysentery	Left upper extremity	Atrophy of cells of l. ant. horn; sclerosis of antero-lateral columns; central myelitis and softening; l. ant. nerve-roots small.	Fibres small, with fatty granules and numerous sarcolemma nuclei.	Gazette Méd., 1871, p. 480.
22	1871	Idem	2	2½	After variola	Both legs	Atrophy of nerve-cells of ant. horns; myelitis evidenced by sclerosis of ant.-lat. columns and central spots of softening.	Fibres small; in part striated; with much granulo-fatty deposit.	Idem, p. 505.
23	1871	Idem	2	3	Febrile	Both legs and left side of back.	Atrophy of cells of ant. horns; patches of softening in gray matter; sclerosis of ant.-lat. columns.	Idem	Idem, p. 541.
24	1873	Lancereaux et Pierret	2	18	.....	Left arm	Atrophy of cells of l. ant. horn; atrophy and sclerosis of l. half of cord.	Not stated	Cited by Petitfils, Atrophie aigué des cellules motrices, p. 33. Paris, 1873.
25		Roth	1	2	Febrile	Both legs	Atrophy of cells of ant. horns of lumbar enlarg., and central myelitis; atrophy of ant. nerve-roots.	Not stated	Virchow's Archiv, 1873; Bd. lviii., Hf. 2, p. 268.

NOTE.—Dr. Allbutt's case (*Lancet*, 1870, II., p. 84,) I reject because of evident traumatism.

One authority (Dr. Hammond)* says: "If the muscles can be made to contract with either the induced or the primary currents, the cure is merely a matter of time and patience;" but I am afraid that this is rather a sanguine expectation. I should give a very guarded prognosis, under these circumstances, in all cases having lasted beyond a year.

I will be very brief about the treatment. The management of the first or febrile stage is a matter of uncertainty; few practitioners see the cases in this stage, and when they do, the diagnosis of simple fever, or of fever symptomatic of some teething or intestinal disorder, is usually made. Were I to meet with such a case, and have due reason, from occurrence of delirium, convulsions, and the presence of hyperæsthesia, to suspect impending spinal palsy, I should leech the child's spine, and apply counter-irritants to the extremities. Besides, treatment indicated by the state of the mouth or bowels should be carried out. The treatment of the second stage is likewise a matter about which no rules based on solid experience can be laid down. I should favor irritating the spine and the extremities, keeping the child's bowels free, and applying electricity, in either of the forms commonly employed, to the palsied muscles.

The management of the third stage may be divided into (*a*) the treatment of the central lesion and of the atrophy; and (*b*) the curing of the deformities.

(*a*) We know no means which will with certainty remedy the central lesions which I have described as existing in this disease. Strychnia and nux vomica were prescribed by Heine and by other older authorities, but are now abandoned. The hypodermic injection of strychnia about the wasted parts has been recommended of late, and is worthy of a trial; from $\frac{1}{60}$ to $\frac{1}{16}$ grain may be injected with safety, according to the age of the patient. Of course everything which shall tend to improve the patient's general condition (hygiene, nutritious food, cod-liver oil, exercise) will favor the reconstruction of the atrophied nerve-cells. The means of treating the palsy and atrophy consisted, until a few years ago, in the (nearly always vain) application of the faradic current, cold and hot douches, and the systematic friction of the atrophied muscles. These last are valuable, especially the alternate use of ice (or cold water) and hot water to produce hyperæmia. Beyond these in value comes the use of the galvanic current, which will in many cases produce good contractions in the wasted muscles. The number of cells to be used must be determined by trial, 10—20—30 elements of Stöhrer's battery, may be required to obtain a reaction. The positive electrode should be placed upon the nerve-trunk supplying the atrophied group of muscles, and the negative sponge upon various muscles of the group; the current being meanwhile interrupted slowly by removing and replacing the negative electrode, or (to produce maximum irritation) reversed as well as interrupted by a mechanical contrivance on the battery or in the hand. I would suggest the use of nitrous-oxide gas for the purpose of avoiding the intense pain produced by a large number of cells. Especially is anæsthesia useful in first examinations when you want to base a prognosis upon the result. An advantage offered by the use of this adjunct is, that the child being still, you are able to recognize a small muscular contraction which might be overlooked during the struggles of the suffering patient. How difficult it is to be sure that contractions occur under these circumstances, those of you who have attended in the electrical room of the College will remember. I am led to make a remark which I should have made when speaking of the prognosis, to the effect that a safe negative prognosis cannot in my opinion be based upon a first or second galvanic examination. If you can afford the time, and your patient the money, you should ask for a number of trials, at least six, before saying that the patient cannot be cured or improved. A great difficulty in the way of proper and successful galvanization consists in the very common stretched state of the atrophied muscles. For instance, in a palsied leg with healthy posterior tibial muscles, there exists a pes equinus, and in consequence the wasted anterior tibial muscles are stretched to a great degree. Now, gentlemen, I believe that this tense condition will prevent galvanic reaction for a long time, if not indefinitely; and the relief of the tension either by a mechanical contrivance (shoe), or better still by a tenotomy and a shoe, is followed by success in treatment. In illustration I would cite a private case of my own, a lady suffering from symptomatic muscular atrophy consequent upon cerebro-spinal meningitis, in whom the muscles of the legs were in much the same state as the muscles in cases of infantile spinal palsy; the posterior tibial muscles having in part recovered. The anterior tibial muscles were kept tense by a strong pes equino-varus, and for several months careful galvanization (even electro-puncture) produced no reaction. At last, as a *dernier-ressort*, I asked Dr. H. B. Sands to cut the tendo-Achillis in both legs and to put the limbs in plaster-of-Paris. This was most dextrously done, and four days after the tenotomy distinct contractions appeared under galvanization in the atrophied muscles.

The muscles, after improving in size under the above means, gradually begin to obey the will, and also respond to the faradic current. This stage in recovery should be carefully looked for, and the change of current made.

The indications for tenotomy and for mechanical treatment of the deformities are various, and really out of my province. You would do well to call in the aid of a surgeon skilled in the devising of apparatus, and make use of the instrument as auxiliary means in promising cases. The most important use of tenotomy I take to be that referred to above, facilitating the galvanic treatment. Incurable cases, and cases in which only slight improvement can be hoped for, had better be at once sent to an orthopædic surgeon for advice and treatment.

The foregoing table of autopsies, in cases of infantile spinal paralysis, may prove useful. I believe it to be quite full.

* A Treatise on Diseases of the Nervous System. New York, 1871, p. 642.

Emphysema of Post-Clavicular Space.—Dr. G. H. Butler, of New York, reports a case of rupture of a bronchial tube attending an acute bronchitis, and occurring during an attack of coughing. The patient, a female, aged 55, large and fleshy, showed the emphysema, the result of the rupture, in the post-clavicular space. The treatment for the emphysema consisted in a compress. Recovery good.

Ventilation in our Schools.—The subject of ventilation in our schools is being pretty thoroughly discussed in the daily papers. A remedy is sought for the evil. We believe now, as ever, that medical inspection will be the first step in the proper direction.

Charity Hospital, New York.—Dr. H. Knapp is Visiting Ophthalmic Surgeon to this institution, *vice* Dr. H. D. Noyes, resigned.

Original Communications.

OPHTHALMOSCOPIC OPTOMETRY, AND DEMONSTRATION OF A NEW OPHTHALMOSCOPE.

By Dr. H. KNAPP,

SURGEON TO THE NEW YORK OPHTHALMIC AND AURAL INSTITUTE, AND OPHTHALMIC SURGEON TO CHARITY HOSPITAL, NEW YORK.

(This paper was read before the Medical Society of the County of New York, on November 24, 1873.)

When I selected the subject for this paper, I had, at first, some misgivings whether it could be made sufficiently attractive for a medical audience not specially engaged in the culture and practice of ophthalmology. In an interview with which our esteemed President honored me, I could recognize, through the veil of his exquisite politeness and professional courtesy, that he shared my feelings. Yet the subject is not without importance, and, though not entirely new, still too little appreciated, not only by the profession at large, but even by, I dare say, the majority of ophthalmic practitioners. A steady attendant of the meetings of the Medical Society of the County of New York during the last five years, I could not fail to witness that any subject, however remotely connected with the science and art of medicine, found an appreciative and indulgent audience if it had some claims to novelty and practical importance. When a paper was less favorably accepted and less generously commented on, not the special nature of the subject seemed to be the cause, but want of novelty and thoroughness.

The ophthalmoscope is no longer an instrument in the hands of specialists only. The number of general practitioners who have learned its application and employ it with benefit in the diagnosis of various diseases is daily increasing. A comparatively new field is its use as an optometer; that is, (1) the *determination of the refraction of an eye independently of the statements of the patient;* and (2) *the determination of the location and size of morbid conditions or products in the interior of the eye.*

I will illustrate my subject by examples, and, in analyzing them, show the *object*, the *importance*, and the *method* of ophthalmoscopic optometry.

Two weeks ago a lady brought to me an orphan-boy, eight years of age, She stated that she was one of the visitors of the Asylum, and that the boy had not advanced in his instruction on account of bad sight. She had his eyes examined in an ophthalmic hospital, and was told that the deficiency of vision was caused by a "wasting away of the optic nerves," and that nothing could be done for it. Fearing, on the strength of this statement, that the child was threatened with blindness, she wished to have my opinion on his eye-disease. He could readily make out middle-sized print, but small print appeared indistinct to him, and the longer he tried to read, the more indistinct the print became. At distance he read Sn. XL. With the ophthalmoscope I saw a well-marked crescent around the optic disk, so common in near-sighted eyes, but no other abnormity. Testing his refraction with the ophthalmoscope, I found, not myopia, but hyperopia, the degree of which was $\frac{1}{10}$ in either eye. With +10 or +12 glasses his vision showed the normal acuity both for distant and near objects. The lady bought the boy a pair of spectacles, which removed all his trouble. She brought him to me again two days ago, stating that he is now able to go along with his class in his instruction, and seems quite another child.

This case is by no means uncommon, and shows the advantage of possessing a method of ascertaining objectively the state of refraction of the eye. The boy was too young for giving relevant answers on functional examination of his organs of vision.—From many examples I beg to select and relate the two following:—

Two twin brothers, aged six years, of Mannheim, Germany, physically and mentally well developed, were brought to me by their—wealthy and ambitious—parents, who stated the boys did not learn to read, pretending that they were unable to see the letters clearly enough to distinguish them from one another. The parents had never seen any disease in the eyes of the boys, nor had they noticed any deficiency of sight in their plays and movements. On ophthalmoscopic examination I found the four eyes sound, but hyperopic of $\frac{1}{8}$. I ordered them convex spectacles No. 6, and neither parents, children, nor teachers complained afterwards.

A still more remarkable case came under my care while I was residing at Heidelberg.

A student of law, 20 years of age, wanted to have his eyes examined. On inspection they showed nothing extraordinary, but when I asked him to read he held the book so close to the eye that the nose slided over the paper along the lines he was reading. His cornea was not an inch distant from the letters, and when he had read a short time the tip of his nose was black. He read fluently, however, and seemingly without an effort. In this way he had gone through all his studies. Once he had consulted a celebrated oculist of the modern school, but had neither learned in what this peculiar defect of his eyes originated nor how it could be amended. On examining him I found that he easily read finest print when pressing the book against his nose, and letting the light fall in from the temple. Looking at remote objects, he half closed his eyelids, and even thus could count fingers at the distance of about eight feet only. In every respect he made the impression of an excessively near-sighted person. All concave glasses, however, from the weakest to the strongest, were rejected as making his sight worse. Examining him with the ophthalmoscope, I found the refractive media, inner coats, and optic disks in normal condition, but hyperopia $\frac{1}{4}$ in one eye and $\frac{1}{\frac{1}{3}\frac{1}{6}}$ in the other; the highest degrees of that anomaly ever observed in eyes possessed of their crystalline lenses. The degree of hyperopia, as found with the ophthalmoscope, was confirmed by the ordinary test-glasses. With spectacles +4 he fluently read finest type at the ordinary distance, and his far-vision was excellent. He ever after wore his glasses with the greatest comfort, and his prospects for the future were no longer clouded by an unbecoming and embarrassing infirmity. But what trouble, annoyance, and mockery he might have been spared had the nature of his eye-disease been sooner detected!

In determining the existence and degree of myopia, the ophthalmoscope may be very useful, though this error of refraction is less likely to be overlooked than its opposite condition, hyperopia.

I will try, Mr. President and gentlemen, shortly to explain the method of determining ametropia, *i.e.*, errors of refraction, with the ophthalmoscope. You all know that ophthalmoscopic examinations are made according to two methods: that in the direct or upright and that in the inverted images. The examination in the upright image only is available for the de-

termination of the anomalies of refraction. If the background of the eye be illuminated by the reflector of the ophthalmoscope, the illuminated portion of the background becomes a luminous body, sending forth rays of light in every direction. A portion of these rays find their way through the pupil and cornea into the air. The course they pursue depends on the location of the luminous part of the background, and the refractive powers of the crystalline lens and cornea. In emmetropic eyes, *i.e.*, eyes of a normal refraction, the background emits rays which leave the cornea as parallel, provided that the eye examined makes no effort of accommodation. An emmetropic observer, intercepting these rays with relaxed accommodation, can bring them to a focus on his own retina; that is, he receives a distinct image of the background of the examined eye. If the patient is near-sighted, the rays emerge convergent from his cornea, and unite in a point at a finite distance before his eye. The situation of that point depends on the degree of his near-sightedness. The physician may intercept these rays by a concave glass, which renders them parallel and then brings them to a focus on his own retina. The problem is to find the proper glass. If we can place behind the ophthalmoscope a series of concave lenses, ascending successively from the weaker numbers to the stronger, looking constantly with relaxed accommodation, the image of the background, indistinct at first, will become clearer and clearer, until one auxiliary glass makes it perfectly distinct. *The number of this glass*, to which, of course, the distance of the glass from the eye has to be added, *indicates the degree of myopia.*

A similar procedure determines the degree of hyperopia. The background of hyperopic eyes, lying in front of the posterior principal focal plane, sends forth rays which emerge divergent from the cornea. Placing convex auxiliary glasses behind the ophthalmoscope, and advancing from the weaker to the stronger numbers, we determine the degree of hyperopia by the strongest positive glass that gives us a distinct image of the fundus. The distance of the glass from the eye, in this case, is to be deducted from its number.

Thus we can determine the state of refraction of any eye. I mention again, that both the physician and the patient must keep their accommodation relaxed during the examination. The physician will learn to do this by imagining that the ophthalmoscopic image is far away, and the patient will relax his accommodation by gazing vaguely at a distant object, or staring into vacancy. If the physician himself is near-sighted or hyperopic, he must take the error of refraction of his own eyes into account, or place behind the mirror another glass, which renders his refraction normal.

The second object of ophthalmoscopic optometry is *the determination of elevations and depressions in the background of the eye.*

Last week a patient 56 years of age was sent to me by a prominent oculist of this city, who wished to have my opinion on the rather critical case of the gentleman. The sight in one eye was perfect, but only $\frac{1}{10}$ of the normal standard in the other. There were no symptoms of cerebral disease, none of external abnormity in the eye itself. Both globes had apparently normal tension, and the pupils responded quickly to light. The field of vision was complete in either eye. The decline of visual acuteness in the one eye had been gradual for some months. With the ophthalmoscope I found incomplete excavation of both optic disks, in its appearance unmistakably glaucomatous. The completeness of the visual field in both eyes, especially in the bad one, was the only feature that made me hesitate to declare the disease simple, *i.e.* chronic glaucoma, and advise iridectomy. Suspending my judgment, I ascertained the shape and depth of the excavation, and found to my surprise that the excavation from the deepest part of the optic disk to its margin was greater in the good eye than in the bad, namely, 0.91 mm. in the former, and 0.63 mm. in the latter. The shape of the excavation differed in the two eyes: in the good, the walls of the disk slanted down gradually; in the other, abruptly. The excavation in the good eye, therefore, was conical, as we see it in physiological conditions, or in atrophy of the nerve; in the bad eye it was cupped, as in glaucoma. The blood-vessels in the former were bent at the margin of the papilla; those of the latter partly bent and partly interrupted. The main trunks of the blood-vessels in both papillæ were crowded towards the nasal wall, but did not reach it, approaching, however, nearer to it in the bad than in the good eye. These conditions led me to the belief that chronic glaucoma probably existed in the bad eye, and a tendency towards chronic glaucoma also in the good. The incompleteness of the excavation, and the preservation of the field of vision, determined me to advise a further observation of the case. If the excavation should increase both in latitude and depth, the diagnosis of glaucoma would be confirmed; otherwise a gradual atrophy, incapable of being arrested by an operation, must be assumed.

Some among you may, perhaps, think that this whole statement betrays pedantry in diagnosis and pusillanimity in therapeutics. What harm is done, it may be said, by the excision of a piece of the iris? Little, in the majority of cases. But suppose the experiment, whether iridectomy is useful or not, had to be tried on your own eye: would not you like your oculistic adviser to note down the depth of the excavation, and measure it again four or six weeks hence?

Besides depressions, there are *elevations* in the interior of the eye, caused by exudations, tumors, protrusions of the coats, etc., the measurement of which may be of great diagnostic and prognostic value. How many cases of cerebral disease show a swelling of the optic disk and its vicinity. To determine the height of such a swelling, and to follow its increase or decrease, is not only of the greatest importance for our judgment on the preservation of sight, but on the nature and course of the intracranial affection. The method of ascertaining the relief of the background of the eye is only a repetition of the determination of the state of refraction. The optical constants of different eyes varying but little, we may consider them as known quantities, and determine the location of any point of a physiological or pathological part, with reference to the posterior principal focal plane of the eye. As in hyperopia the retina lies in front of that plane, in myopia behind it, elevations on the background of a normal eye will be determined with convex auxiliary lenses, depressions with concave ones. It is easy to understand that the higher the degrees of hyperopia or myopia, which correspond to certain elevations or depressions, the farther from the posterior principal focal plane are the points to which such degrees of hyperopia or myopia relate. Their location can be calculated, and furnishes the basis for the determination of the relief of the fundus oculi. Suppose the crest of a choked optic papilla shows hyperopia $\frac{1}{n}$, its base emmetropia; then we know that rays which fall upon the cornea with a convergence of n', are united on the crest of the tumor. n' and the distance of the crest of the choked disk from the second principal plane of the eye, which distance may be called x, form two conjugate focal lengths, of which n is known by ophthalmoscopic investigation, and x can be determined by calculation, according to the

general formula $\frac{F_1}{f_1} + \frac{F_2}{f_2} = 1$. $f_1 = n$, and is positive in myopic, negative in hyperopic eyes. $x = f_2 = \frac{n F_2}{n - F}$

F_1 and F_2 denote the first and second principal focal lengths of the eye: $F_1 = 15$ mm., $F_2 = 20$ mm. If x is $< F_2$, the point in question is situate in front of the posterior principal focal plane; if $x > F_2$, the point lies behind it. For the sake of convenience of calculation, the formula above mentioned may be somewhat altered, as Helmholtz has shown in his *Physiologische Optic*, p. 49. $n - F_1$ means the distance of the anterior conjugate focus from the anterior principal focus. $x - F_2$, which we may call l_2, means the distance of the posterior conjugate focus from the posterior principal focus. If we deduct F_2 from both sides of the above equation, viz.: $x - F_2 = \frac{n F_2}{n - F_1} - F_2$, and reduce the equation, we obtain $x - F_2 = l_2 = \frac{F_1 F_2}{n - F_1}$

l_2 means the distance of the point under examination from the posterior principal focal plane. This point lies in front of the posterior principal focal plane when l_2 is negative, but behind it when it is positive.

I have calculated a table showing l_2 corresponding to the different degrees of H or M, as ascertained with the ophthalmoscope, and shall publish it in the second number of the third volume of the Archives of Ophthalmology and Otology.

If we have determined the distances of the basis and apex of a diseased part from the posterior principal focal plane, we can, by addition or subtraction, easily find their distance from each other. In this manner the height of elevations and the depth of depressions can be measured.

This method of determining the relief of the background of the eye was first described by myself at the *Congrès International d'Ophthalmologie de Paris* in Aug. 1867, and published in the Transactions of that society, page 165, etc., "*Sur la mensuration ophthalmoscopique des élévations du fond de l'œil.*"

A year later *Mauthner* described it in his exhaustive treatise on Ophthalmoscopy, Vienna, 1868, and after him, *Dr. E. G. Loring*, in an excellent paper on the *Determination of the Optical Condition of the Eye by the Ophthalmoscope; with a new Modification of the Instrument for that Purpose. Am. Journ. Med. Sciences*, 1870, p. 323, etc.

From the foregoing remarks, it is clear that we must have an ophthalmoscope at our command that admits of a complete series of auxiliary lenses to be placed behind it. *Liebreich* added five lenses to his mirror, and placed them in a fork-like holder.

More than ten years ago I had a small trial-case made for the purpose of determining the refraction of the eye with the ophthalmoscope. *Dr. H. D. Noyes* enlarged the holder for the auxiliary lenses, fitting it to the glasses of the large trial-cases of spectacles.

Rekoss, of Koenigsberg, placed behind the mirror a rotating disk containing a small number of correcting lenses. *E. G. Loring* availed himself of this contrivance in an excellent manner. He inserted 23 lenses in three disks, which could separately be placed behind the mirror. This was a great improvement on the former instruments. Yet the frequent change of the disks was found laborious.

H. Cohn, of Breslau, put the same number of glasses into one disk, but his instrument appears inconvenient on account of its size, the disk having a diameter of three inches.

I then had the ophthalmoscope made which I placed before the American Ophthalmological Society at Newport, last July, and which I beg leave here to demonstrate.

It consists of the ordinary mirror, having a central perforation of 3½ to 4 millimetres in diameter. (See Fig. 1.)

Fig. 1.

Behind the mirror are two disks, which contain the following auxiliary lenses, both convex and concave: 2, 3, 4, 6, 8, 10, 12, 14, 17, 20, 24, 33, 48—the convex lenses being inserted into the upper disk, the concave

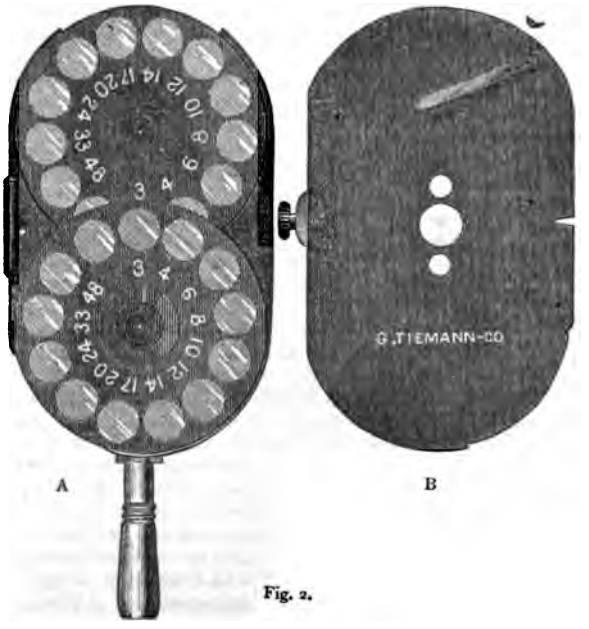


Fig. 2.

into the lower. (See Fig. 2.) In order to obtain a greater number of glasses, the margins of the disks

overlap each other behind the opening in the mirror in such a way that each convex glass can be combined with each concave glass. For the weak numbers, from 8 to 48, such combinations are hardly ever required in practice; but for the stronger numbers they are indispensable. The glasses can be changed without removing the instrument from the eye. The disks are enclosed between two metal plates, which prevent the glasses from being easily soiled. Fig. 3 shows the

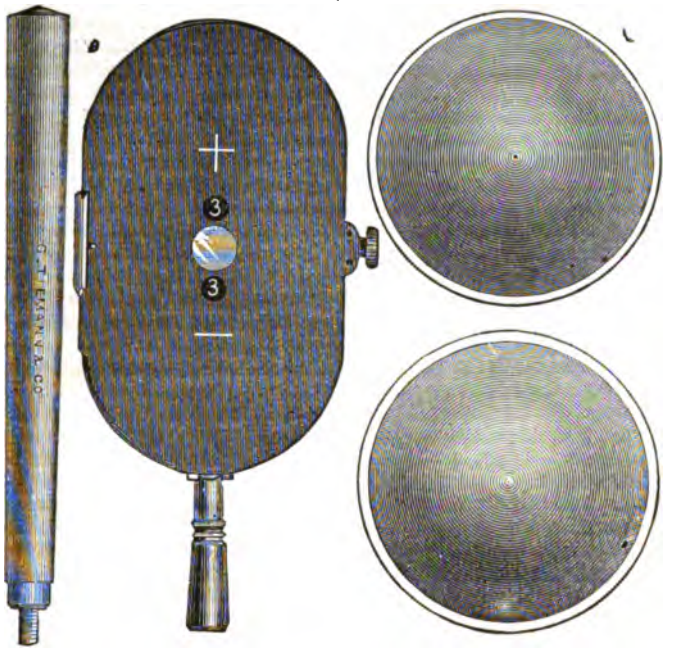


Fig. 3.

posterior surface of the instrument, with two objective lenses.

Through the small openings in the cover, above and below the central perforation, the number of the auxiliary lenses is read. The posterior plate can be removed whenever it is necessary to cleanse the glasses, which may be about once a month.

To use the instrument conveniently, I have arranged a table which shows the most suitable combinations, representing, in near approximation, the numbers of spectacles contained in our ordinary trial-cases. Furthermore, I have calculated the shortening and elongation of the optical axis corresponding to each convex and concave glass. A third table refers to aphakial eyes, *i.e.*, eyes in which the crystalline lens is absent. These tables will be sold with the instrument, and may be hung up in the ophthalmoscope room for reference whenever we want to determine the location of any object in the background of the eye. The measurement of the height of an elevation or the depth of a depression requires no more than the ophthalmoscopic determination of the location of the two remotest points of the morbid parts, and the addition or subtraction of their corresponding values as found in the table.

Since I exhibited this instrument at Newport, *Dr. Loring* has devised a very elegant modification of his previous instrument. He has inserted into one disk all the numbers that were formerly contained in the three disks. The disk of his new instrument has two rows of glasses, each of which, by shifting the disk up and down, can be conveniently placed behind the aperture in the mirror. The glasses of each row can be changed without removing the instrument from the eye.

About six weeks ago I received the September number of Zehender's Klin. Monatsblätter, which contains a drawing and a short description of a new ophthalmoscope by *Dr. L. De Wecker*, of Paris. In this ophthalmoscope 24 auxiliary lenses are inserted into the marginal portion of a disk, which is turned behind the mirror by means of a cog-wheel and a stem. I immediately ordered the instrument, but have not yet received it. If the drawing represents it in its natural size, the hole in the mirror has a diameter of 1.5 mm. only, and each of the lenses has a diameter of 2.5 mm. These dimensions are surprisingly small. To test the availability of this and similar instruments, I have tried to determine, by experiment, how far the size of the opening in the mirror can be reduced. I had a series of mirrors made, in which the diameter of the opening varied between 1 and 5 millimetres. The results of these experiments, thus far, have been as follows: The greatest brilliancy—intensity of illumination—of the ophthalmoscopic image is obtained by an opening in the mirror of 3½ to 3¾ millimetres. If we further reduce the opening, the image becomes proportionately darker.

Openings larger than 4 millimetres in diameter render the image likewise darker, by the fact that they cast a shadow in the centre of the ophthalmoscopic field of vision.

The small openings have still another disadvantage: they act as diaphragms, cutting off the peripheral rays, and thus do not readily indicate whether the adjustment of the ophthalmoscope by means of the auxiliary lenses is accurate or not. As the correctness of the observation depends on the nicety of this adjustment, ophthalmoscopes with small apertures in the reflector are of little service for optometric purposes. They are bad instruments altogether, because they throw a great amount of light into the patient's eye, but intercept so many of the returning rays that the physician obtains a dark image. If there were no

limits in the smallness of the opening in the mirror, the problem to add the necessary number of auxiliary lenses would be simple. Thinking that an opening with a diameter of 3.75 millimetres was the most appropriate, I distributed the auxiliary lenses to two disks, and by making the edges of the disks overlap each other behind the aperture in the mirror, obtained a series of lenses as extensive as pathological or physiological research seems ever to require. The instrument, with regard to brilliancy of the image and accuracy of optometric determinations, is, it seems to me, equal to the best ophthalmoscopes; whereas with regard to completeness and cleanliness, it may, perhaps, have some advantages of its own.

Mr. President and gentlemen: I have ventured to appear before you with a specially ophthalmological subject. If I have not succeeded in engaging your interest for it, I have to accuse myself alone, for the subject would have been worthy of an abler advocate. It is certainly a triumph of medicine to possess the means of detecting, without asking the patient one question, in an anomalous refraction of the eye, the cause of his inability for work, and almost constant headache; and in detecting the cause, we have at the same time found the remedy which cures him from weakness and pain. Furthermore, it is gratifying enough to gaze through the ophthalmoscope on the varied and brilliant pictures of the interior of the eye, and to study them both for their own sake and their connection with general diseases. When, moreover, in the advancement of science, we look no longer on these changes as mere flat pictures, but measure their height and depth to a small fraction of a millimetre, on a field in which, only two decades ago, their reigned impenetrable darkness, then we have passed the lower forms of the qualitative analysis, and arrived at the quantitative. And so, as this field has been gloriously conquered, the whole vast expanse of medicine will, in the long lapse of ages, be cultivated and raised to the dignity of exact science. But since it has to be conquered step by step, I thought it might not be asking too much of a general medical society to lend at times an indulgent ear to the specialist, the small freeholder who ploughs but one acre.

Progress of Medical Science.

The Oleates of Mercury.—These new mercurial preparations, which are being used so extensively and with such success, were first introduced to the profession by Mr. John Marshall.

In a practical and extremely valuable paper on this subject, he says that the oleates are cleanly and economical, and have a much greater diffusibility or penetrating power than the old mercurial ointments, for they are absorbed by the skin with remarkable facility, and manifest the remedial effects with great promptitude. They are not to be rubbed in, like ordinary liniments, but should be merely applied with a brush, or be spread lightly over the part with one finger, otherwise they may cause unnecessary irritations. This result, however, may be obviated by the addition of a small quantity of olive oil or purified lard, according as an oleaginous or an unctuous preparation is required. In his experience, however, the addition of morphia was a great advantage, but it was necessary to use the simple alkaloid, as neither the hydrochlorate, the acetate, nor the meconate are soluble in oleic acid. For every drachm of the solution of oleate of mercury in oleic acid, one grain of morphia is to be added. As a rule, from ten to thirty drops are sufficient for one application. This should be repeated twice daily for four or five days, then at night only for four or five days, and afterwards every other day until a cure is obtained. Unless used in excessive quantities, the oleate does not salivate or produce any marked constitutional disorder. In regard to the applicability and utility of the oleates Mr. Marshall says they seem to be specially designed for persistent or chronic inflammations, provided only that the seat of the disease be in or near to the skin. As to the preparation of this remedy, he adds: "The oleate must be prepared with the oxide precipitated by caustic potash or soda, from a solution of the metal in nitric acid recently made and well dried. The solution of mercury by oleic acid is assisted by a temperature of 300° Fahr. The 5 per cent. solution is a perfectly clear, pale yellow liquid, resembling olive oil, but thinner; the 10 per cent. solution is also fluid and perfectly clear, but as dark as linseed oil; whilst the 20 per cent. solution is an opaque, yellowish, unctuous substance, closely resembling in appearance resin ointment, melting very readily at the temperature of the body, and forming a kind of transparent, viscid, colorless varnish when applied to the skin. The chief care to be observed in the manufacture of these solutions is not to hurry the process, and not to employ a high temperature, or the mercury will be immediately reduced."

In cutaneous diseases the 5 per cent. solution, without morphia, is recommended. It has been found particularly serviceable in sycosis menti. In congenital syphilis a piece of the 20 per cent. ointment, about the size of a pea or a bean, may be placed in the child's axillæ night and morning for five or six days, and without any sign of uncleanliness, produces constitutional effects. As a topical remedy for certain local manifestations of syphilis, such as the non-ulcerating forms on the head, face, and neck, the 10 per cent. solution is a valuable adjunct to other treatment.

Diagnosis of Early Pregnancy.—Among other valuable papers read at the recent meeting of the British Medical Association, was one by Dr. Rasch, in which he called attention to an important symptom of early pregnancy, which had never before been mentioned by the leading obstetrical authorities.

After detailing the principal symptoms which are to be found in the text-books, Dr. Rasch said that no opinion should be expressed in any case unless the uterus had been made out beyond doubt by the bimanual examination. The vaginal examination should always be made by *two* fingers, unless circumstances forbade it, as by so doing results much more accurate could be obtained. An enlargement found, the distinction had to be made between enlargement by hypertrophy or by tumors, and enlargement by pregnancy. To solve this difficulty, the author has continued his investigation in a very large number of cases, of which he kept notes for nearly ten years, and enlarged experience has fully borne out what had helped him in making a few times a right diagnosis where better men had failed. This important symptom was fluctuation. That it must be felt very early seemed to him, *a priori*, certain. The best way to feel it was to introduce two fingers into the vagina, while the other hand steadied the womb through the abdominal walls, and alternately to manipulate the uterus with the two fingers. In some part of the uterus the fluctuation would be found often in one corner of the fundus, sometimes lower down. In most cases of early pregnancy the author found the uterus anteverted, and then the manipulation was more easily done than when the womb was retroverted. At first it

was usual for fluctuation to be felt only by the fingers in the vagina, sometimes, too, by the outer hand at the same time. After three months, it would be mostly felt by outward manipulation alone, but we should never trust to that only. The catheter should always be introduced when accurate results were desired.

ANTIDOTE TO PHENIC ACID.—The poisonous effects of phenic acid are due to the acid itself, and not to the alterations to which it is subject.

Mr. Husemann has proved, by numerous experiments, that the alkalies and alkaline earths are true antidotes to this acid, while the fat oils, glycerine, etc., are entirely without effect.

In cases of poisoning, it is necessary to use these antidotes in large excess and in solution, the saccharate of lime being employed successfully. This is obtained, as is known, by dissolving 16 parts of sugar in 40 of distilled water, and adding 5 parts of caustic lime. Digest for three days, stirring from time to time, filter and evaporate to dryness. The product thus obtained constitutes the saccharate of lime; it dissolves easily in water.—*Journ. de Pharm. et de Chim.*, Sept. 1873.

ACTION OF FRESH CHOLERA DISCHARGES UPON ANIMALS.—An interesting series of experiments with the discharges from cholera-patients was made during the latter part of July, of this year, by Andreas Högyes, of the University at Pesth, a report of which is published in the *Centralblatt für die Med. Wissensc.*, No. 50. The points which it was sought to determine were, in brief, the following:

I. Do fresh cholera discharges operate injuriously upon the organism of lower animals, and under what manifestations?

II. Does an artificially excited catarrh of the stomach and bowels increase the susceptibility to the action of the cholera discharges?

III. Can a current of air bear away particles from the discharges, which are capable of affecting the organism injuriously, and what difference is there in this respect between non-disinfected and disinfected cholera discharges, simple diarrhœal discharges, and putrifying fluids?

IV. Are cholera discharges freed from their form-(living) elements still able to act upon animals?

V. What portions of the disinfected or non-disinfected discharges does the air-current bear away, and what is the further destiny of these form-elements when they fall upon a neutral medium or one adapted to their development? In what manner do these elements modify the action of this medium?

To decide the first and second questions, fresh cholera discharges were given to healthy dogs and to others, in which an artificial catarrh of the stomach and intestines had been excited by the administration of croton-oil, sulphate of copper, etc. Both dogs were made sick, with frequent vomiting and diarrhœa. But while the previously healthy animals recovered in three or four days, those in which a catarrh had been excited died the day following.

To determine the third question, rabbits were placed under a bell-glass and exposed to air which had become impregnated as desired, from either cholera discharges, disinfected or not disinfected, diarrhœal discharges, or putrefying fluids. Two rabbits, in one of which a bronchial catarrh had been produced by inhalations of ammonia, were exposed for twenty-four hours to air from cholera discharges not disinfected.

On the third day following, violent purging set in, and both animals became soon cold and collapsed. The one in which a bronchial catarrh had been excited died first, and the other five hours later. A rabbit exposed for twenty-four hours to air from disinfected cholera discharges remained well. Another, exposed for an equal length of time to atmosphere impregnated from simple diarrhœa-stools, escaped uninjured, while another, which remained for twenty-four hours in atmosphere contaminated from putrid fluids, though at at first made insensible, afterwards recovered without harm.

As to the fourth point, cholera discharges were injected into the jugular veins of dogs and guinea-pigs, the discharges in one case having first been freed from their form-elements by thorough filtration, and in the other not. The effect in both instances was the same.

To determine the final points, a current of air was made to pass through fresh cholera discharges, both disinfected with carbolic acid and not disinfected, and then conducted through two separate vessels, which contained, respectively, an indifferent fluid-medium, and one adapted to the support and development of any living forms which the current should bring to it. The two fluids used were distilled water and the fluid of Cohn. In a short time, in the fluids communicating with the undisinfected discharges, a considerable number of form-elements had accumulated, which proved to be, almost exclusively, the bacteria which are usually found in putrid animal fluids. In twelve hours Cohn's fluid had become clouded and milky; in twenty-four hours it was covered with a thick bluish-green fungous slime, and emitted a foul odor. The distilled water remained clear. Both these fluids, when injected into the veins of dogs and rabbits, caused the same symptoms as after injection of the cholera discharges themselves. This was also true of the fluid of Cohn, after its fungous elements had been quite removed by filtration, showing that these elements are, at least, not the only source of infection. Similar experiments with discharges which had been disinfected with carbolic acid, showed that the organisms which the air-current brought to Cohn's fluid were incapable of propagation. Upon injection of the distilled water and fluid of Cohn, after previous disinfection of the discharges by carbolic acid, only symptoms of carbolic-acid poisoning were manifested.

PROFESSOR ZEISSL ON THE TREATMENT OF SYPHILIS.—After some experimental treatment of syphilis in its various manifestations, Zeissl expresses the following conclusions:

"The preparations of iodine judiciously administered, with the appropriate regimen, are able to cause the disappearance of the first manifestations of syphilis, or, at least, to so modify the disease that it yields to a small number of mercurial inunctions, without a subsequent recurrence of relapses, that is, so that the syphilis may be regarded as definitively cured." He further observed that the initial appearances succumbed sooner to an early mercurial course than to the iodine treatment. While the later phenomena quickly disappeared under iodine, the initial indurations resisted longer. The affections of the mucous membranes, as papules upon the tongue, and in the whole region of the mouth and pharynx, yielded much earlier to the treatment with iodine, at the most necessitating occasionally a slight cauterization, while with mercurial treatment they persist for a longer time. Instead of the iodide of potassium, the following formula was employed, on account of its greater cheapness:

℞. Tinc. iodinii..... ʒ ss.
Aquæ fontis..... ℥ vj. M.
S. A tablespoonful at morning and night.

Moreover, the tincture of iodine seemed to show a much less tendency to cause acne or coryza.

The writer further observes that syphilis in pregnant women, especially where the infection has occurred at conception, is more rebellious than in women not pregnant. It will not usually disappear before delivery of the fœtus, and it is always necessary to continue the treatment at the expiration of pregnancy.

Iodiform is much used by Zeissl, locally for indolent ulcers of the skin, and internally, in doses of from 2 to 3 grains for syphilitic neuralgia. It is given in pill, with some bitter extract. For the gangrenous buboes which occur in syphilitic patients, especially in hospital practice, nothing was found equal to the continual water-bath. He found the actual cautery in these cases much less serviceable. He would supplement the old adage: *Quod ferrum non sanat, ignis sanat* with *Quod ignis non sanat, balneum continuum sanat.*—*Wiener Med. Wochensc.*, 46.

A Successful Case of Abdominal Section for Intussusception.—At a meeting of the Royal Medical and Chirurgical Society, in Nov., Mr. Jonathan Hutchinson narrated a case in which he had successfully opened the abdomen for the relief of intussusception. The patient was a child aged two years. The intussusception had commenced at the cæcum, and was of such length that its extremity, presenting the inverted ilio-cæcal valve, was extruded several inches at the child's anus. The condition had been one month in course of development; latterly the case had been treated as one of prolapsus, and attempts had been made to keep the bowel in place by means of a cork pad. The child was very ill, and the author having failed in attempts to effect reduction by enemata, etc., and having had experience of several similar cases which had ended fatally, determined to operate. The child was put under chloroform, and the abdomen was opened in the middle line, below the umbilicus. The intussusception was then easily found, and as easily reduced. The after-treatment consisted only in the administration of a few mild opiates, and the child made a rapid recovery.

The author next narrated briefly the particulars of three somewhat similar cases in which he had been consulted, and in which the intussuscepted bowel could be easily felt by the finger in the rectum. In all three, in spite of persevering treatment by injections, bougies, etc., the patients had died unrelieved.

Without attempting anything like a statistical analysis of recorded cases, the author appended to his paper, in tabular form, the notes of a very considerable number of cases bearing upon the diagnosis and treatment of similar lesions.

From the consideration of these the following conclusions were suggested:

1. That it is by no means very uncommon for intussusception to begin at the ilio-cæcal valve, and to progress to such a length that the invaginated part is within reach from the anal orifice, or even extruded.

2. That it is of great importance in all cases of suspected intussusception to examine carefully by the anus.

3. That in almost all cases of intussusception in children, and probably in most of those in adults, the diagnosis may be made certain by handing the invaginated part through the abdominal wall.

4. That the prognosis of cases of intussusception varies much; first, in ratio with the age of the patient, and secondly, with the tightness of the constriction.

5. That in a large proportion of the cases in which children under one year are the patients, death must be expected within from one to four or six days from the commencement.

6. That in the fatal cases death is usually caused by shock or by collapse from irritation, and not by peritonitis.

7. That in many cases it is easy, by estimating the severity of the symptoms (vomiting, constipation, etc.), to form an opinion as to whether the intestine is strangulated or simply irreducible.

8. That in cases of strangulated intussusception, whilst there is great risk of speedy death, there is also some hope that gangrene may be produced, and spontaneous cure result.

9. That in cases in which the intussuscepted part is incarcerated and not strangulated, there is very little hope of the occurrence of gangrene, and it is probable that the patient will, after some weeks or months, die, worn out by irritation and pain.

10. That the chances of successful treatment, whether by the use of bougies, or by the injection of air or water, are exceedingly small, except in quite recent cases, and that if the surgeon does not succeed by them promptly, it is not likely that he will succeed at all.

11. That the cases best suited for operation are those which have persisted for some considerable time, and in which the intestine is only incarcerated; and that these cases are also precisely those least likely to be relieved by any other method.

12. That in the cases just referred to, after failure by injections, bougies, etc., an operation is to be strongly recommended.

13. That the records of *post-mortems* justify the belief that, in a considerable number of the cases referred to, the surgeon will encounter no material difficulty after opening the abdomen.

14. That the circumstances which might cause difficulty are—(1) the tightness of the impaction of the parts; (2) the existence of adhesions; and (3) the presence of gangrene.

15. That in selecting cases suitable for operation, the surgeon should be guided by the severity of the symptoms to an estimate of the tightness of the strangulation, and as to the probability of gangrene already set in.

16. That in cases in which the patient's symptoms are very severe, or the stage greatly advanced, it may be wiser to decline the operation, and trust in the use of opiates.

17. That the operation is best performed by an incision in the median line below the umbilicus.

18. That in cases of intussusception in young infants (under one year of age) the prognosis is very desperate, scarcely any recovering excepting the few in whom injection treatment is immediately successful, whilst a large majority die very quickly.

19. That the fact just mentioned may be held to justify, in the case of young infants, very early resort to the operation.

20. That it is very desirable that all who, in the future, have the opportunity for *post-mortem* examination of intussusception cases, should give special attention to the question as to whether an operation would have been practicable, and should record their results.

To Increase the Growth of Bones.—M. Ollier read a paper recently on this subject, supporting his statements by experiments and clinical observations. He finds that where there has been an arrest of growth of the long bones, impeding progression or producing deformity, he can induce growth by producing a superficial exfoliation of bone by means of caustics.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, January 15, 1874.

THE NEXT MEETING OF THE STATE SOCIETY.

THE coming meeting of the Medical Society of the State of New York will naturally call the attention of members and delegates to some questions of importance which should come up for consideration. There is no doubting the fact that a great interest is manifest throughout the State in the success of this organization, and that there is a disposition to aid it in all endeavors to make it thoroughly representative. Although as a State Society it ranks all the others throughout the country, there are yet many changes to be made in its management before it can best serve the interests of the profession of the State.

The election of permanent members, being one of the peculiar features of the organization, has from the time the Society first existed claimed a good deal of attention, and the abuses connected therewith, as well as the remedies suggested, have been pretty freely discussed. It has always been considered an honor to gain the position of Permanent Member, more probably for the reason that such a position is hard to obtain, than for any very special privileges which may belong to the office. The difficulties in the way of a choice of but one or two members each year, from a very small number of districts, have been, on general principles, no easy task to overcome, and the dissatisfaction of the unsuccessful candidates, always in the majority, no more than can be expected.

The very difficulties in the way of a choice have stimulated ambitious and pushing candidates to use strategy rather than trust to the governing influences of ordinary justice in the selection. There must always be disappointment and complaint on behalf of unsuccessful candidates; but it should be the aim of such as have the best interests of the Society at heart to reduce the murmurings to the minimum. The first step in this direction is a strict impartiality in the selection of the Nominating Committee.

As at present managed, there is too much danger that not only the permanent membership, but all the other offices of the Society, may be under what in political parlance is styled a "ring" influence.

The responsibility of appointing the Nominating Committee rests entirely with the President, who, with the best intentions, is too apt to follow a time-honored custom of making his selection from a very small list. The consequence is, that we find the same gentlemen on this committee from year to year. We have all along contended that this should not be, and that the time has come when a change should be made, if for no other than the appearance which such a custom assumes of being partial, and the ultimate danger of establishing a centralization inimical to individual rights and common justice. There should always be representative men from the different districts to compose this Nominating Committee, and this could be accomplished without being compelled to narrow a selection to a few of the former Presidents.

A good plan would be to make selections from the prominent officers of the different County Societies. The very fact of their holding such positions proves their right to be representatives. Such gentlemen, too, would be acquainted with the wants of the members of their Society, and could vote intelligently upon the different candidates. All other things being equal, such a vote would naturally be given to one who has been the longest eligible.

Another plan was proposed at the last meeting, which is a good one, and if it could be made to work, would guarantee, if possible, a better choice. This proposition comprises the formation of a committee of delegates from each district, which committee shall elect one of its number for the Nominating Committee. This suggestion cannot, however, be carried out at the next meeting, for the reason that it would involve an alteration in the by-laws. All we have to hope, however, is, that the President will be more than ordinarily careful in the selection of the Committee, and will use his best exertion to secure the co-operation of good and fresh men. This being done, the duty of the Committee should be to give the preference to those in a given district who have waisted the longest for it.

The publication of the Transactions by the Society should be another matter worthy of thoughtful deliberation. The opportunity to declare an independence of legislative favor will be a good one, even if by the majority it may be considered that the virtue has become a necessity. We hope that there will be no two opinions regarding the policy to be adopted, viz., the independent publication by the Society of its proceedings from this time forth. The volumes could then be issued in a creditable shape, and in a reasonable time after the annual meeting. The best men of the Society

are in favor of it, and now is the time to take a decided stand. The expense of the undertaking will not be burdensome if each County Society follows the example of our own in agreeing to pay its share.

It is becoming more and more the general opinion of the profession that very little can be gained in furthering professional interests by appeals to Legislatures. The experience of the State Society in this respect is particularly suggestive, and all the deductions are strongly to endorse such an opinion. This fact deserves to be taken into consideration in connection with the time the annual meeting is held. This particular season was agreed upon principally, if not solely, for the reason that the Legislature met at the time, and it was considered to be of the greatest possible convenience and utility to have the suggestions and recommendations of committees attended to at once. As we are beginning to believe that legislation does us but little good, is it worth while, because the Legislature is in session during the worst season of the year, to sacrifice every other interest of the Society to such a consideration? At the last session, the practicability of changing the time of meeting to the early fall came up for discussion, and the committee to whom the matter was referred reported favorably. For some reason or other no action was taken. We hope at the next meeting the question will again come up, and be decided in the affirmative. There is, in our opinion, every argument in favor of a change; indeed, they are so obvious to every delegate and member who has to travel any distance during the worst winter month, and during the busiest professional season, that they need not be presented.

In conclusion, let us hope that there will be the usual good attendance, and that the usual harmony will pervade all the deliberations, whether for the government of the profession or for the advance of its scientific interests.

ARMY STAFF RANK.

As an evidence of the interest taken in the petition of the Army Medical Officers for increased rank and pay, we notice that the medical societies in this and other localities are appointing committees to draft appropriate resolutions endorsing the measure, and that they intend to leave no doubt in the minds of our legislators as to its imperative necessity. We can hardly imagine that any member of Congress can fail to see the justice of the demands; but the trouble may be, that it may appear to them so small a matter that action may be indefinitely deferred. There is no more effectual manner of proving that the profession all over the country are determined to take a different view, than by the prompt passage of appropriate and telling resolutions. We have always thought that the profession could make itself a power if it only chooses to direct its concerted action in one direction; and the present seems a fitting opportunity to prove the truth of this assertion. The bill will probably come up for discussion during the present month. Let each and every society take a part in the struggle, each and every physician take an early opportunity of bringing the matter to the attention of the Congressman of his district, that each and every member of our National Legislature may thoroughly understand the nature of the said bill and the reasons why the bill should pass. In another place we publish such of the resolutions as have been presented up to the time of our going to press.

Reviews and Notices of Books.

TRAITEMENT DE LA PLEURÉSIE PURULENT CHEZ LES ENFANTS. (THE TREATMENT OF THE PURULENT PLEURISY OF CHILDREN.) By Le Docteur J. JOUGLA. Paris: F. Suvy. 1873.

THIS little work of clinical and practical value has been prepared under the auspices of MM. Potain, Laboulère, and Bouchut, names which will no doubt add weight to it. It is divided into three chapters: the first being a general study of the affection; the second, of the therapeutic and operative measures of treatment, and the third, of the temperature in the affection. The clinical history, diagnosis, and prognosis are very clearly brought out by the author, and in the section devoted to therapeutics he gives the indications very fully. The clinical portion of the work is founded upon a number of cases which are recited in the body of the book. The author at the end appends the following conclusions:

1. The diagnosis of purulent pleurisy depends principally upon clinical thermometry.

2. Surgical interference should be instituted much earlier in children than in adults, on account of the rapidity with which the thorax becomes deformed, and also on account of the morbid susceptibility of young subjects.

3. The treatment should be to remove, by capillary aspiration, as much purulent liquid as possible, and to prevent the entrance of air.

4. If the effusion does not reappear until after a long time, or in small quantity, the repetition of the puncture, with the same precautions, is interference under similar conditions as at first.

5. If the pus is fetid, injections should be made with tincture of iodine or some other suitable application.

6. If the purulent fluid is reproduced rapidly and abundantly, recourse should be had to drainage under water, to which may be added injections if the pus is fetid, and also in cases where it is thought that the secreting surfaces may be so modified as to cause them to secrete less.

7. The injections may be made with the siphon apparatus of Potain.

8. If grave symptoms continue or increase in spite of treatment, or if it is feared that the cause of them may be false membranes formed on the pleuræ, drainage must be resorted to.

9. The strength of the patients must be sustained by therapeusis and appropriate hygienic measures.

The injections used may be either that of Trousseau, tinct. iodine 50 parts, iodide of potassium 2 parts, water 100 parts, mixed with an equal quantity of tepid water, or diluted alcohol, or decoction of cinchona, or chloride of sodium, one part to fifty (Roper).

At the end of the work is a large plate of thermometric tracings.

LES TUMEURS DE L'OVARIE CONSIDÉRÉES DANS LEUR RAPPORTS AVEC L'OBSTÉTRIQUE. (OVARIAN TUMORS CONSIDERED IN THEIR BEARINGS UPON OBSTETRICS.) By Dr. JUSTIN TREILLE. Paris: J. B. Bailliere et Fils. 1873.

IN this work the author divides ovarian tumors into four classes:

1. Serous unilocular or multilocular cysts, with which are included hydatid cysts, which are exceedingly rare, Chaicot having published several examples. This class also accompanies often the following:

2. Dermoid cysts, in which sebaceous matter, fat, bones, teeth, and hairs, are found. For this reason they have been termed sebaceous cysts, adipose cysts, hairy cysts, pili-dental cysts. The genesis of these cysts has for a long time excited the sagacity of pathologists.

3. Malignant tumors of the ovary are not always isolated. Sometimes they are accompanied by serous or dermoid cysts, thus constituting complex tumors, cysto-sarcomas, cysto-carcinomas, etc.

4. Finally, ovarian tumors formed by extra-uterine pregnancy. This form was denied for a long time, but besides being borne out by physiology there are authentic cases (Keller: Thèse de Paris, 1871), in which the pregnancy took place in the ovary. After a very careful consideration of the whole subject, the author condenses his material into the following propositions:

1. A total and absolute degeneration of the *couche origine* is necessary in order that conception should be impossible, even if other portions of the generative apparatus preserve their integrity and exercise their function.

2. Cases of sterility are frequently met in women having ovarian tumors; in these cases it is necessary to seek the cause in the alteration of position and structure which these tumors produce upon the uterus, and more especially upon its neck.

3. The excessive indulgence in venereal pleasures, though they may have no influence in the production of these tumors, may at least provoke in them an inflammation of which the result is not always favorable. It is the beginning of this unfavorable state that reproduction exercises upon tumors of the ovary an influence, of which the dangers increase in proportion as the gravid uterus runs through its stages of evolution, attains its height of intensity during expulsion, and reacts also upon the childbed.

4. In order to convince observers of this dangerous influence, it is sufficient to enumerate the troubles observed during gestation, accouchement, and the puerperal lactation, namely, rupture, inflammation of the tumor, strangulation of the pedicle, abortion, uterine displacements, rupture of the uterus, a labor so complicated as to necessitate the whole series of obstetrical operations, even to embryotomy and Cæsarean section.

5. When the tumor forms an obstacle to the free passage of the child, we would suggest the following indications:

1. If possible, to push it back out of the true pelvis.

2. To draw off the fluid contents of the tumors, and to be very careful in opening solid tumors.

3. In case of a solid and non-movable tumor, to act as in a case of bony obstruction, to reduce the volume of the child by the usual means, always taking care not to wound the tumor, as that would expose the patient to fatal consequences.

4. If it is impossible to bring the child, mutilated, into that portion of the pelvis left free by the tumor, practise gastrotomy; but decide at the beginning of the labor, in order to save the child and give the mother some chances of a cure.

6. If the enormous expansion of a serous cyst is a cause of worriment to a pregnant woman, recourse should be had to puncture as a palliative measure.

7. During the lying-in state a tumor may be punctured, of which the volume, its inflammation, or rupture, might compromise life.

8. The dangers which we have enumerated might induce us to recommend premature delivery, if abortion in the early months was not always a very serious matter.

Premature artificial delivery has given very deplorable results; however, it may be practised in the case of a solid tumor so adherent that it could be pushed back, and sufficiently small as to permit, without wounding it, the passage of the child.

9. Observations of ovariotomies performed during pregnancy authorize us to recommend them in the early days of gestation, when a very grave danger arising from the tumor menaces the life of the mother.

10. Medical treatment of ovarian tumors in pregnant women is useless and dangerous, and should be proscribed.

The subject is carefully studied, and is supported by a large amount of clinical knowledge, but a vagueness of expression mars its pages considerably.

DU TRAITEMENT DES POLYPES LARYNGIENS. (ON THE TREATMENT OF LARYNGEAL POLYPI.) By Dr. CHARLES LIVON.

THE studies necessitated for the elaboration of this brochure were prosecuted by the author in the hospitals of Marseilles, chiefly under the direction of Dr. Nicholas Duranty. The author gives a quite complete history of the affection, considers its bibliography at some length, and presents very clearly the clinical features of a number of cases. He appends a résumé of his propositions at the end of the work. They are mainly as follows: Since the discovery of the laryngoscope, laryngeal polypi may be accurately diagnosticated, and, consequently, rationally treated—a fact borne out by experience.

Three methods are at the command of the surgeon of relieving his patient of an affection not grave of itself, but which, by its development, may compromise his life by interference with respiration. These three methods are:

Their destruction by the natural passages.

By artificial openings.

By a combination of the two.

Each has been employed several times, and they can be supported by proofs.

The observations, although numerous, are not sufficiently so as to establish rules which should be followed. In the presence of the facts now at our command, the following statement may be made:

The method by the natural passages is the one which should be always tried, at least it has indications which render it most favorable to us; it is the most inoffensive, the least painful, and compromises in the least degree the patient's life. It sometimes requires more time, but has the least disadvantages.

The method by artificial passages is applicable when the first does not succeed or cannot be tolerated. Although presenting little gravity, it is always an operation which sometimes attacks the voice. It is perhaps more expeditious of performance and more precise than the former, but in practice it will be found

that many patients will prefer to remain several weeks under treatment than submit to an operation.

As this method involves several procedures, it is necessary to determine which to choose.

The answer cannot be given peremptorily, as the treatment is influenced by the diagnosis. In our experience two operations ought to fulfil all the indications. The first is the section of the thyroid cartilage, the second the incision of the thyro-hyoidian membrane. The first is applicable for cases in which polypi are found, from the ventricles of Morgagni as far as the commencement of the trachea. The second is applicable to cases of polypi of the upper portion of the larynx.

As regards the section of the crico-thyroid membrane, it should be exceptional, as it does not permit a sufficiently large opening. In complete laryngo-tracheotomy, unless under special indications, division of the cricoid cartilage should be avoided, as it is always useless and does not offer any advantages.

Finally, the combined method should be employed in cases where asphyxia has necessitated tracheotomy. As to tracheotomy itself, which is really a palliative treatment, it should only be performed in a case of violent dyspnœa, where the seat and cause of the obstruction are unknown. In contrary cases recourse should be had immediately to laryngotomy, which will fulfil all the indications.

Ossification of the thyroid cartilage is not a contra-indication to its section, for it only induces a little delay of cicatrization, and it is only exceptionally that its division produces perichondritis and necrosis, for in all the cases reported in this work in which this operation was performed, these accidents are not mentioned as occurring. The work is well studied out, and the author has taken great pains to familiarize himself with operative manipulation.

DU TRAITEMENT DE LA COQUELUCHE PAR L'HYDRATE DE CHLORAL ET PAR LE BROMURE DE POTASSIUM. (ON THE TREATMENT OF HOOPING-COUGH BY CHLORAL HYDRATE AND BROMIDE OF POTASSIUM). By Dr. PIERRE ARMAND. Paris: Adrien Delahaye. 1873.

THE author informs us that this work is the result of the observation of the treatment of twenty-three cases in the Charity Hospital of Lyons, in the service of Dr. Chatin. These cases are given in full, and besides there is a quite full bibliography. The conclusions of the author are as follows:

1. Hooping-cough is a spasmodic catarrhal affection, but the nervous symptoms are predominant when there is no complication. It is of specific nature, but has not a fixed and determined course. Art can interfere successfully in abridging its duration and rendering it more mild.

2. Bromide of potassium and hydrate of chloral have already been used with success by several therapeutists in hooping-cough. The results obtained have appeared superior to those given by most remedies.

3. The physiological properties of bromide of potassium and of hydrate of chloral permit a rational explanation of the mechanism of their action.

4. The observations which are reported confirm their efficacy in this disease, since we have almost always seen that under their influence the number and intensity of the fits of coughing are diminished, the vomitings cease, and that most frequently the duration of the disease appears shortened.

5. The bromide may be employed with advantage at the commencement of the convulsive period; the hydrate of chloral in the confirmed convulsive period.

6. The use of the bromide in moderate doses is not attended with any inconveniences.

7. The hydrate of chloral is almost always harmless. It should always be prudently given, especially in the commencement, in consequence of the intolerance to it observed in some subjects.

8. These two remedies, but especially the chloral, are contra-indicated in cases complicated with severe bronchitis or broncho-pneumonia.

ETUDE SUR LE CANCER PRIMITIVE DES VOIES BILIARES. (STUDY UPON PRIMITIVE CANCER OF THE BILIARY DUCTS). By Dr. F. VILLARD. Paris: A. Delahaye. 1872.

THE author of this well-written little brochure informs us that it is mainly based upon the observation of a case in the service of Dr. Besnier, in the Hôpital Sainte Antoine, Paris, and besides this upon two cases belonging to M. Charcot. He has also collated other cases from various sources. He enters fully into the history, pathological anatomy, etiology, symptomatology, and clinical history of the affection, and at the end of his work gives the following résumé of its contents:

1. Primitive cancer of the biliary ducts, an affection relatively rare, may occur in four different forms: encephaloid, scirrhous, colloid, and villous. Under whatever form it may develop, the morbid process always begins in the submucous connective tissue, and it is only later on that it invades the mucous and muscular coats. Among the interesting anatomo-pathological peculiarities which may arise from cancerous degeneration, it is well to note the formation of calculi and the dilatation of the biliary ducts. Consecutive to this dilatation an inflammation often supervenes, and a suppuration of the hepatic ducts, which may burst and give rise to interstitial hepatitis.

2. Cancer of the biliary ducts is ordinarily observed in old persons, and oftener in woman than in man. Heredity does not appear to have any influence in its etiology.

3. A pain in the right hypochondrium, assuming sometimes the character of hepatic cholic, an ovoid, globular, sometimes nodulated tumor, situated at the spot where the gall-bladder usually is; icterus with its consequences, sometimes fever of an intermittent type; the symptoms of cancerous cachexia are the principal symptoms of cancer of the biliary ducts, an affection of which the diagnosis is always difficult, and of which the termination is always in death. The work is of its kind admirable. The conclusions are clearly and fairly drawn, and the clinical points of the cases admirably worked up; besides this, the diction is clear and simple.

A MANUAL OF MEDICAL JURISPRUDENCE. By ALFRED SWAINE TAYLOR, M.D., F.R.S., etc. Seventh Amer. ed. revised from author's last notes, and edited, with additional notes and references, by John J. Reese, M.D., Prof. Med. Jurisp. and Toxicology in the Univ. of Penn. Phila.: H. C. Lea. 1873. pp. 879.

THE PRINCIPLES AND PRACTICE OF MEDICAL JURISPRUDENCE. By ALFRED SWAINE TAYLOR, M.D., F.R.S., etc. Second Ed. In 2 vols., 8vo. Phil.: H. C. Lea. 1873.

BOTH of these works, by the same author, treat virtually of the same subject, and yet are distinctive enough in their characters to make one independent of the other. The Principles and Practice of Medical Jurisprudence, although much the larger work of the two, owes its inception and elaboration to its distinguished predecessor the Manual, which has run so triumphantly within the past few years through seven editions. This last edition of the Manual is probably the best of

all, as it contains more material, and is worked up to the latest views of the author as expressed in the last edition of the Principles. Dr. Reese, the editor of the Manual, has done everything to make his work acceptable to his medical countryman. Not only has he added nearly a hundred pages of valuable original matter in the shape of notes, etc., but has retained the additions, appropriately bracketed, of the two former editors, Dr. Hartshorne and Mr. Penrose. The notes of these gentlemen give a particular value to the edition, and especially those of Mr. Penrose, who has done so much to adapt it to the wants of the American bar. As its name implies, it is intended to present the science in abstract for the guidance of medical students and younger practitioners, in trivial cases, the details being disposed of in the larger work.

Speaking of the larger work as an edition, all we can say is, that it is abreast of the times and fully sustains the enviable reputation of the first edition. All the important medical cases are worked up to date, necessitating the addition of much new material, and much modification of older material. Some changes have been made which seemed to the author to be necessary to make the work even more acceptable. The subject of medical evidence has been much elaborated, and deserves the most careful and studious attention of every physician. In these times, when any medical gentleman is liable to be called upon for an opinion, it is more than ordinarily necessary that he should be prepared to give it, and have a knowledge and appreciation of the general principles upon which to act in such emergencies as will every now and again arise.

The remarks on the subject in question cover the whole ground, and leave nothing to be desired on the part of any one who wishes to acquaint himself with the requirements of his position as an expert, professional or accidental.

Other portions of the work have been enriched by many additions. The sections on wounds and cicatrices, especially the latter, are particularly well worked up. The section on poisoning contains the notice of some new toxic agents, their effects, and the methods for their detection. Large additions have also been made to the chapters on criminal abortion, life insurance, insanity, and infanticide. In fact every department of the science has received its due share of attention; all the important facts bearing upon the leading and representative medico-legal cases have been presented in a remarkably condensed and intelligible manner. The deductions from these cases are, as they should be, general in character, the author being content to leave elaboration of details of particular or special points to the reader, by the aid which is afforded by a reference to the cases themselves as reported in full in the different law reports of this and other countries. As a whole, the work is unequalled, and fully sustains the reputation which it has earned of being the standard authority upon the subject.

ESMARCH.—The method of arresting hemorrhage during operations, introduced by Prof. Esmarch, has been lately employed by Dr. Figaro, House-Surgeon at Bellevue Hospital, in a case of amputation of the thigh. Not a drop of blood was lost, and the tissues of the limb, when cut, presented a more blanched appearance than the cadaver. No unpleasant results have attended the case thus far. The saving of even a small quantity of blood is sometimes of great importance, and that is one of the advantages attending the method.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 26, 1873.

DR. ERSKINE MASON, PRESIDENT, in the Chair.

FIBRINOUS CASTS OF BRONCHIAL TUBES.

DR. AUSTIN FLINT exhibited some casts of bronchial tubes which were expectorated by a medical gentleman in Canada, who wrote the following letter explaining the specimen:

ONTARIO, CA., *Nov.* 17*th*, 1873.

"DEAR SIR:—You will perhaps recollect that on the 21st of June last I called to consult you with regard to my lungs. You diagnosed slight tuberculosis in the apex of the right lung. You stated that you thought I could live it down, and said you regarded the slight attacks of bleeding beneficial rather than otherwise. You recommended me to use no medication except quinine as a tonic, and strongly urged every kind of *regimen* calculated to improve the general health. On my return home I had a slight bleeding, amounting to perhaps in all two ounces. I took quinine as you recommended, avoiding exposure in going out at nights, and soon recovered a good appetite and much better general health. I had no further bleedings from the lungs until the 20th of October, when, on returning home one evening after a long walk, which produced no fatigue whatever, I spat up about an ounce of fluid blood. I continued for six days to spit up from one to two ounces morning and evening, and on one occasion during the daytime, during which time my appetite was exceedingly good. Up to this time I had gained about ten pounds in weight, and thought my chances of recovery improving. After the six days' bleeding I began taking quinine again, and felt very well. On the 13th of the present month bleeding began again, more copiously than at any other former time, and continued so on the 14th at intervals of a few hours. On the night of the 14th I was attacked with a severe rigor, followed by heat, thirst, cold feet, and headaches; about two o'clock in the morning I began to get up membranous casts from the bronchi, 'a sample of which I have sent you by parcel-post accompanying this letter.' For about twenty-four hours I continued to expectorate these membranous bodies, and always accompanied by gushes of an ounce or two of blood; during the twenty-four hours I expectorated fully sixty ounces of blood, leaving me, of course, very weak, and I apprehend the casts are not all up yet. I should perhaps mention here, that during all the summer I had a slight cough in the morning, with expectoration of a drachm or two of thickish muco-purulent matter and considerable thin frothy mucus; there was also during this time slight dulness over the apex of the right lung, with an occasional subcrepitant râle about the upper part of the lung. Expansion on inspiration was somewhat restricted, and there were vague pains in the right shoulder. The evening I began to expectorate the casts I labored under severe febrile excitement, and the expulsion of each mass was always preceded by an aching pain in some part of the right lung; sometimes beneath the scapula, sometimes in the clavicular space, under the arm, and towards the last at the base of the lung. Yesterday and to-day the bleeding has ceased, with the exception of small clots, and I notice that the apex of the lung expands

in the staff for its last three inches, and, threading its tubular extremity over the thread-like bougie, carried it somewhat more readily down to the stricture. I got this idea from Wakley's "railroad" instruments for stricture, which had been recently brought out from London. As this instrument did not work entirely well, I diminished the length of its bridge or tubular extremity to an inch and a half, and still later, in trying to adapt this device to the management of stricture complicated with false passages, I had the tunnelled portion diminished to less than the third of an inch, with its extremity made conical (like the metallic tip of Wakley's catheters).

I have these instruments in my possession, subject to the inspection of any who may desire to see them.

I may add, incidentally, that I had occupied myself as early as 1853 in the anatomical study of the curve of the fixed portion of the urethra; and, later, in the effort to secure the making of steel sounds adapted to this curve. These, with a slight degree of conicity towards the beak, and above Nos. 6 or 7 in size, I have employed for more than 15 years in the treatment of stricture by dilatation. I also satisfied myself, very early, that it was wrong to tie a catheter in the bladder after "perinæal section," and adopted the practice, which the anæsthetic condition of the patient so greatly facilitates, of thoroughly dividing all the strictured points of the urethra during the operation, until it permitted the ready introduction of a conical steel sound of fullest size. This accomplished, I allowed the patient to void his urine at will through the perinæal wound, tying no catheter in the urethra, and contenting myself with the careful introduction every day, or every second day, of a full-sized steel sound. I had, meanwhile, reviewed and tabulated all the recorded cases of perinæal section which had occurred at the New York Hospital since its foundation, with the intention of publishing a monograph, containing the points of practice which I thought I had established; but the exigencies of the war, and the pressure of the new and responsible duties which it imposed upon me, cut short my design, and, in the end, broke down my health. Returning from Europe in 1865, I brought some new and fine filiform bougies of whalebone, and also a new stricture-dilator, which Mr., now Sir Henry, Thompson, had kindly had made for me, as better, in his opinion, than Mr. Holt's. Whilst showing these to Gouley, I said to him, "Now, if we can get a hole drilled in the beak of this dilator, so that it can be threaded on one of these whalebone bougies, we can perhaps run it down through the stricture more readily than on the ordinary 'gum' bougie, and thus in a case complicated with false passages, we can dilate or split, and thus gain command of the stricture," or words to this effect. He said he would see what the instrument-maker could do, and in a few days brought me a Thompson's dilator, with its beak perforated, and made to unscrew. I disapproved of the removable beak, as possibly dangerous, so he had another made nearly in the form now in use. Most certainly, at this date, there was no word breathed to me as to any "invention" on the part of Gouley. He had the instruments made for me, at my suggestion, as he had been in the habit of doing for me for years, for he had kindly taken the trouble off my hands of personal interviews with the cutlers (with occasional exceptions) for, I should say, ten years before this date. These instruments were charged to me, have been paid for by me, and are now in my possession. I have used them with some advantage, and will discuss their merits elsewhere.

These, Mr. Editor, are the facts which, at a later date, I communicated to my friend, Dr. Bumstead, in answer to his inquiries. He used them as he saw fit. I had then no idea or design of establishing a claim to original invention; nor have I now. In suggesting the perforation of the beak of Thompson's dilator, I was simply conscious of a desire to carry out an idea with which I had been familiar for years, and for which the credit of originality, I think, goes back as far as old Desault's open catheter and whalebone conductor, two feet long, as adopted and improved by Phillips, and recommended by him in retention of urine from prostatic obstructions.* I should think the real invention—the "*procédé de Gouley*"—probably came later. I mean the invention of "A *method*, and not THE *principle*." (See RECORD, Dec. 15th, p. 625.) I did not hear of it from the inventor himself until after our business relations had ceased. When, in 1870, he addressed to me a formal demand to disavow all previous knowledge of "tunnelled instruments," it may well be conceived why I asked for an explanation. At the interview that followed I recalled to him the facts I have stated, saying, that it was impossible for me to ignore them even to oblige him, but that I would advance no claim to invalidate any invention of his, and advised him to follow kindly rather than war-like counsels. He expressed himself, as I thought, well disposed to follow my suggestion, saying, amongst other handsome things, that "I had been his master in urethral surgery," etc. But, alas! this must have been another "ingenuous expression of a generous impulse" (see RECORD, p. 626), for his "letters" have since shown evidence of a most truculent spirit.

Of the "book," and the note I wrote its author thanking him for it (which he prints), I am free to confess, Mr. Editor, that, at the time of writing, I had read but the "preface" and "contents," was very favorably impressed, and had it only in my mind to acknowledge a courtesy in a kindly manner. But I have since read enough of it to find that my old good feeling for its author led me into an error of expression; I recognize in it a good deal of my own teaching, but less acknowledgment of that teaching than I should have a right to expect from an "*accurate*" person, especially when that person had been the recipient of benefits at my hands. To this, however, I must submit. That particular lack of virtue which the Athenians punished as a crime is not included in our written code.

The name of Dr. Bumstead is also introduced by your correspondent, and treated with ignominy. I need not say that the slurs directed against him have no foundation in truth. The author of the best and most judicial work on his specialty in our language can afford to ignore insinuations which are as disingenuous and unjust as they are discourteous.

I trust, Mr. Editor, that I shall not again have occasion to ask you to insert in your columns any further controversial notes from me, and, so far as I am interested, the discussion must end here. Judging from the communications I have been receiving (which I shall not publish), I should infer that the sympathy your correspondent has tried to evoke has not fallen entirely to his share, and that there are some who believe that the aggressor in this matter is not

Yours truly,

WM. H. VAN BUREN.

104 MADISON AVENUE, Dec. 30th, 1873.

* I think any one who reads Phillips's article on the "*Introduction de la sonde sur un conducteur*," will agree in this opinion. (*Vide* Phillips's *Traité des maladies des voies urinaires*, Paris, 1860, p. 425.)

A Reply from Prof. Freeman J. Bumstead, M.D.

To the Editor of The Medical Record.

Sir:—I should have replied to Dr. Gouley's first letter to the Record upon this subject, had I not felt that the matter lay entirely between him and Dr. Van Buren.

His second letter, which appeared in your issue of December 15th, indulges in personalities with regard to myself to which I have no desire or intention of replying; but his charges against me of unfairness as an author, demand that I should explain my position to the readers of the Record and the readers of my book.

In the autumn of 1869, I was one evening engaged in writing an article on Stricture of the Urethra for the *American Practitioner*, when Prof. Van Buren happened to call at my office, and, in the course of conversation, the subject of "tunnelled urethral instruments" being mentioned, he remarked: "That is my idea;" and, upon my further inquiry, he repeated that the invention was his.

I confess at that time I was not fully aware of the importance of the subject; it did not occur to me that for the purposes of catheterization, etc., tunnelling the end of an instrument was such an immense stride beyond using the whole of it for a tunnel, as Wakley, and before him Foulker and Hutton, had already done, and that urethral surgery had been revolutionized by this new modification; I did not foresee the amount of paper and ink which might in future be expended upon the discussion of the subject; and I was little aware that a professional reputation might be at stake upon what I regarded, at the time, as so trivial a matter.

Relying, therefore, upon Prof. Van Buren's statement to me, I attributed this device to him in the paper which I was writing; and in the next edition of my book, which appeared in October, 1870, I said, when speaking of some improvements in urethral instruments: "In one of these inventions, original, I believe, with that eminent surgeon, Prof. Wm. H. Van Buren, M.D., the extremity of urethral instruments is perforated, like a canula, for a short distance," etc.

Meanwhile I had not spoken again upon the subject to Dr. Van Buren, nor had I then, nor have I since then, received any communication from Dr. Gouley in claim of the invention.

I saw Dr. Van Buren, however, in December, 1870, when he mentioned to me that he had received the letter from Dr. Gouley, already published by the latter in the Record; and I find in a note still in my possession, written by Dr. Van Buren to myself upon other matters, and dated December 21, 1870, the following sentences at the close:

"With regard to the question of originality in the use of tunnelled instruments raised by Dr. Gouley, I sent for him, and, recalling certain of our former conversations, in which I had suggested similar modifications to those now claimed as original by him, *he seemed satisfied.** I declined to answer his letter farther. I have an instrument or two I should like to show some day, if this question retains any interest beyond the moment.

"Sincerely yours,
"Wm. H. Van Buren."

Whether it has been my duty at any time to communicate with Dr. Gouley, or his to communicate with me, if he had any strictures to make upon my statements, is a question which your readers, Mr. Editor, will decide for themselves; and I feel assured that his charges against me of bad faith, etc., etc., will be received at their true value as affecting both their author and myself.

Respectfully yours,
F. J. Bumstead.

32 W. 26th St., New York, Dec. 20, 1873.

* The italics are my own.—F. J. B.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 19, 1873, to January 3, 1874.

Abadie, E. H., Surgeon.—Granted leave of absence for four months on Surgeon's Certificate of Disability. S. O. 1, A. G. O., January 2, 1874.

Baily, E. J., Surgeon.—Granted leave of absence for three months. S. O. 249, A. G. O., December 18, 1873.

Styer, Chas., Asst. Surgeon.—Leave of absence extended twenty days. S. O. 67, Division of the South, December 16, 1873.

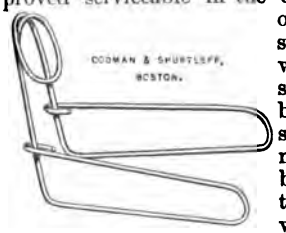
New Instruments.

A NEW WIRE SPECULUM FOR EXAMINATION AND TREATMENT OF DISEASES OF VAGINAL WALLS.

By J. G. PINKHAM, M.D.,

Lynn, Mass.

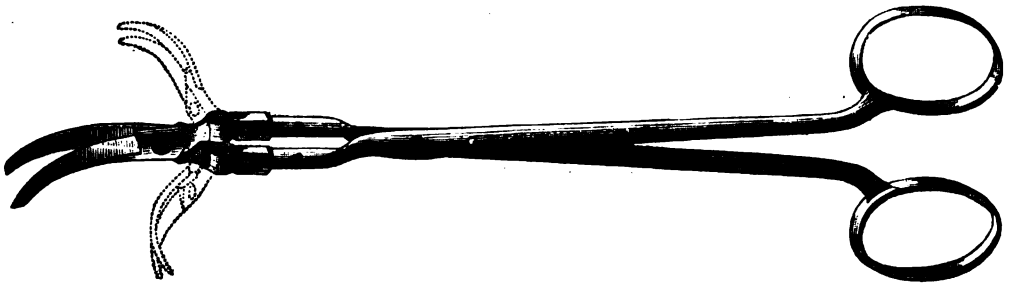
The accompanying wood-cut represents a new and simple form of wire speculum, which in my hands has proved serviceable in the examination and treatment of the vaginal walls. It consists of a single piece of wire, bent into the form shown in the cut. It will be observed that there is no soldering about the instrument, the ends of the wire being secured by a sharp turn around that portion which connects the spring and blades. Hence it is easily made, and of slight cost. The blade can be of any length and shape desired, and the spring of any degree of strength. The upper wires can be moved up or down at the outer end, with the result of widening or narrowing the blades.



Pressure upon the base of the blades with the thumb and forefinger closes them, so that the introduction is easy. The exposure of the vaginal walls on all sides is complete. In some cases it gives a good view of the cervix, but it is not intended to be used in operations upon the uterus. In working about the meatus urinarius it is often of great service, especially in the absence of an assistant. Its merits are simplicity and effectiveness. It is made by Codman & Shurtleff, of Boston.

NEW SCISSORS WITH DOUBLE POINTS.

We present our readers with a sketch of a new and ingenious instrument devised by Geo. Tiemann & Co., of this city, which will be seen to possess many advan-



tages, and to admit of a wide range of adaptation. As will be seen, it is a long scissors, the blades of which are attached to their respective shafts by universal joints, allowing the said blades to be deflected and fixed at any required angle. As a single instrument it will be seen to be a combination of many, and will doubtless prove of great value to such as are called to operate upon the uterus and throat. The peculiar situations of tumors in these localities very often require a particular curve or angle for easy and effectual manipulation; and when such necessary conditions can be fulfilled at the moment of the operation, the advantages of the instrument as a whole are quite apparent.

A NEW ILLUMINATOR.

ANOTHER new instrument, devised by the same firm, and of value in operations upon deep cavities, is an illuminator, a sketch of which we present to our readers. The instrument is mainly constructed of brass, and is provided with a lamp for kerosene or oil, the wick admitting of an easy adjustment by means of a

side-screw. The handle can be folded against the chimney, so that the instrument can be packed in a small compass. The light passes through a convex lens, and can, by means of a sliding-cap, be focused at varying distances from two to five inches. It may prove useful in operations upon the ear, vagina, rectum, and throat, and may be of great service in operations at night, where a strong and reliable light may not always be obtainable.

Medical Items and News.

THE DEATH OF DR. W. C. ROBERTS.—At a meeting of the New York Academy of Medicine, held in the lecture-room of Saint Mark's Church, Dec. 12, 1873, a committee consisting of Drs. G. M. Smith, Oliver White, and J. L. Vandervoort, presented the following preamble and resolutions, which were unanimously adopted:

Whereas, It has pleased an all-wise Providence to remove by death William C. Roberts, M.D., Vice-President of the New York Academy of Medicine, therefore,

Resolved, That the Fellows of the Academy are called upon to mourn the loss of an associate, loved for his social qualities, respected for his courtesy and rectitude, and honored for his erudition.

Resolved, That the Fellows will ever pleasantly recall the brilliancy of his wit, the readiness of his anecdotal illustrations, the richness of his poetical and classical learning, and the happy fluency of his extempore speech.

Resolved, That the numerous productions of his pen will not only be an enduring monument of his industry, but will also permanently perpetuate the clearness of his acumen, the force of his logic, and the ripeness of his scholarship.

Resolved, That the Fellows attend his funeral in a body, and that a copy of these resolutions be engrossed in the minutes of the Academy, be presented to the family, and be printed in the medical journals of this city.

AUSTIN FLINT, M.D., *President.*
W. T. WHITE, M.D., *Secretary.*

HOMŒOPATHY IN THE UNIVERSITY OF MICHIGAN.—The Circuit Court of Washtenau County, Mich. (in which the University is located), refused on the twenty-third of December to issue a writ of mandamus compelling the Regents to appoint two Professors of Homœopathy, in accordance with the law passed by the State Legislature at its last session. This decision probably disposes of this perplexing question, inasmuch as the Supreme Court of the State had previously made a similar denial, and these two preliminary rulings would seem to foreshadow the decision when the question comes up for final adjudication on full argument.

DR. T. MATLOCK CHEESMAN has been appointed by Major-Gen. Shaler, of the First Division N. G., to be Division Surgeon, with the rank of Colonel.

THE DEATH OF DR. ALFRED UNDERHILL.—At a joint meeting of the Medical Society of the County of New York, the New York Academy of Medicine, and the Medical Library and Journal Association, held in the lecture-room of Trinity Chapel, Dec. 11, 1873, the following preamble and resolutions, presented by Dr. Joel Foster, were unanimously adopted:

Whereas, It has pleased our Heavenly Father in His all-wise providence to remove by death our beloved brother, Dr. Alfred Underhill,

Resolved, That while we feel and lament the great loss sustained by the medical profession, the Christian Church, the institutions of charity and the families to whom his life was devoted, we humbly bow to the

Divine will in this affliction, and acknowledge the goodness that sustained him in his painful and fatal illness, and enabled him to complete his earthly career, as he had long lived among us, strengthened and consoled by religion, and constantly enjoying the love and tender regard of family and friends.

Resolved, That our sympathy and sincere condolence are hereby tendered to the family of the deceased. In behalf of the medical profession, we gratefully point to his unceasing benevolence and patient devotion to duty, having filled with honor the highest offices in our Societies.

Resolved, That a copy of these resolutions be transmitted to the family of the deceased, and to THE MEDICAL RECORD and *New York Journal of Medicine*.

ELLSWORTH ELIOT, M.D., *Chairman*.
W. T. WHITE, M.D., *Secretary*.

ARMY STAFF RANK.—The following resolutions were passed by the New York Academy of Medicine:

Resolved, That the New York Academy of Medicine do hereby cordially unite with the American Medical Association in their memorial to Congress in support of a bill to increase the efficiency of the Medical Department of the Army of the United States, now before that honorable body. They consider it an act of justice that the members of so important a branch of the service, gentlemen of the highest professional attainments and excellence of character, and charged with such weighty and responsible duties, should hold the same relative rank and enjoy the same emoluments as members of the other staff corps of the Army.

That it be respectfully urged upon the members of Congress to use their influence in support of the bill in question.

That a copy of the above resolutions, duly authenticated, together with a copy of the memorial pamphlet, be furnished to each member of Congress from each district.

Resolved, That a copy of these proceedings be furnished for publication to the medical journals.

JOHN C. PETERS, M.D.
GURDON BUCK, M.D.
FRANK H. HAMILTON, M.D.

DEATH OF DR. JONAS P. LOINES.—At a special meeting of the Medical Board of the Eastern Dispensary, held in the Dispensary rooms, December 17th, 1873, the following resolutions relative to the death of Dr. J. P. Loines were unanimously adopted:

Whereas, Our friend and associate, Dr. J. P. Loines, after a long and active career of usefulness in the cause of suffering humanity, has been suddenly removed from our midst by death, to our great and heartfelt sorrow; therefore, be it

Resolved, That in this dispensation of the Divine will we feel most keenly the stroke which has deprived us of the counsel, companionship, and assistance of one whose many excellent qualities of mind and heart had endeared him to each and every member of the staff of this institution.

Resolved, That in his death the Eastern Dispensary is deprived of the valuable services of one who for more than twenty years directed its internal management, and to whose prudence, fidelity, and skill its success and reputation are largely due, while his uniform courtesy and consideration of the feelings and rights of all who were associated with him enabled him to preserve unbroken harmony during the entire period of his administration.

Resolved, That the medical profession generally recognizes with gratitude his services as a scientific investigator, and the benefits which have accrued to humanity from his achievements in the specialty to which for many years his attention was chiefly directed.

Resolved, That the poor of this Dispensary district lose in him a kind and faithful friend, one whose ear was ever open to their complaints, and whose sympathy and efforts in their behalf were spontaneous and unfailing. His kindly face will be missed by them with unfeigned sorrow.

Resolved, That the house-staff of this Dispensary meet in this place at 11 A.M. to-morrow, the 18th inst., and proceed thence to his residence in Mount Vernon, to pay the last tribute of respect to his memory.

Resolved, That a copy of these resolutions be presented to his family, and that they be published in THE MEDICAL RECORD and the *New York Journal of Medicine*.

ROYAL B. PRESCOTT, M.D.
EDWARD FRANKEL, M.D.
H. LE BARON HARTT, M.D.

BELLEVUE HOSPITAL, NEW YORK.—Dr. W. H. Polk has been appointed one of the Visiting Physicians, *vice* Dr. B. W. McCready, resigned.

DR. E. PEUGNET read a paper before the Medico-Legal Society, December 26, on the Medical Jurisprudence of the Stokes case, for the purpose of proving that wounds of the intestine are not so fatal as has been generally supposed; also that the cause of the death of Fisk was due directly to poisoning. The paper was discussed by Drs. Sayre, McCready, and others.

DISTRICT MEDICAL SOCIETY, COUNTY OF HUDSON, NEW JERSEY.—We have received a second list of officers of this Society, and as each list is claimed to be the correct one, and as we have no means of judging the particular merits of the case, we present them both. As the case now stands, it appears to be at variance with the axiom that two bodies cannot occupy the same place at the same time, and have the same name. The second list of officers for this year, elected December 2, 1873, is as follows: President, A. A. Lutkins, M.D.; Vice-President, B. D. Carpenter, M.D.; Secretary, H. Mitchell, M.D.; Treasurer, B. A. Andrews, M.D.; Reporter, E. W. Buck, M.D. Delegates to the State Medical Society, Drs. Vondy, Pendergrast, Cornelison, Hunt, Forman, Mitchell, Morris, Buffet, and Carpenter. Alternately, Lutkins, Andrew, Bird, Geisler, Burdett, Hardenburgh, Case, Van Houten, and Reeve.

THE CAUSE OF SIMILARITY IN TWINS.—Dr. J. F. Bird, of Philadelphia, writes:

It has long been my purpose to call the attention of physiologists and medical practitioners to the consideration of the probable causes of the fac-simile representation of twins. It is a question of considerable interest that twins should so frequently be so much alike that even their parents can scarcely know the one from the other, whilst other persons cannot at all determine which is "*Minnie*" and which is "*Bessie*." In my experience, and that extends to a number of well-marked cases during a period of over thirty years, I have invariably found that when twins are contained in the same sac, and sustained by the same placenta, they have always had a slavish resemblance to each other; whilst those contained in different sacs, and sustained by different placentæ, are as unlike as children born of the same parents at different periods, however remote. This hypothesis is sustained, not only by actual and positive and repeated observation, but by inquiries made of other observers. In one family there are two cases of twins. The first pair were contained in

the same sac of waters, and are exactly alike; the other pair were delivered from different sacs, and are no more alike than are the other children. I delivered a case also of triplets. Each child was in a separate sac, and neither resembled the other particularly. Let these observations go to the curious or speculative members of the profession for what they are worth. I am satisfied with the theory, and believe that close observation will establish it beyond contradiction.

A Freak of Nature.—Recently there was exhibited in Paris a Russian peasant and his son who had upon their heads and upper parts of their bodies a most remarkable growth of hair. The father, Andrian Jeftichjew, aged fifty-five, was born near Kostrema, in Russia. His whole face, nose, forehead, cheeks, and ears are covered with long brown hair, which extends also down his back for some distance. The skin beneath the hair is apparently healthy, and no nævoid discoloration is to be seen even where the hair has been cut in order to enable the man to see. The French description likens his appearance to a "King's-Charles" (*sic*), but the resemblance is really more to a skye terrier.

The son, Fedor, is only three years old, and the hair is so much lighter in color, and less thick, that the skin is much more perceptible. A remarkable feature in both father and son is their nearly edentulous condition. The father is said to have had no teeth up to the age of seventeen, and then to have had four teeth only in the lower and one in the upper jaw, and his gums give no evidence of there being germs of other teeth within them. In commenting on these cases *The Lancet* says: "In a small work on the human hair, published in 1869, Dr. Herman Biegel has collected a number of cases of somewhat similar growth, the most remarkable occurring in a family in Burmah, three generations of which have developed a growth of hair on the face much resembling that of the Russians now being exhibited. Those individuals in Burmah had also the peculiarity of being nearly edentulous, one of them, a male, aged thirty, having only four incisors in the upper jaw; and another, a female, having the same absence of all back teeth, though her female child of five years is said to have a complete first set of teeth.

"The statement that a race of hairy men existed in Japan, has been supported by Mr. Martin Wood, who read a paper before the Ethnological Society of London, in 1865, on 'The Hairy Men of Yesso,' but denied in the 'Memoirs of the Anthropological Society of London,' by Mr. Bernard Davis, who shows that the hairiness of the bulk of the race in question is in no way exceptional. Virchow, also, in a lecture on this subject, states positively that neither in respect of the arrangement of the hair nor in regard to the teeth have these Ainos of Japan any analogy with the Russian or Burmese hairy men.

"Mr. Darwin, in his work on 'Animals and Plants under Domestication,' has not failed to notice the relations between the abnormal growth of the hair and the teeth, and is of opinion that these cases forcibly call to mind the fact that two orders of mammals—the edentata and cetacea—which are the most abnormal in their dermal covering, are likewise the most abnormal, either by deficiency or redundancy of teeth."

Modern Practice of Medicine.—The London *Lancet* is responsible for the following witty anecdote of Dr. Robert Barnes, which may have more than a grain of truth in it: "I have recently been honored by a visit from a lady of typical modern intelligence, who consulted me about a fibroid tumor of the uterus; and lest I should stray beyond my business, she was careful to tell me that Dr. Brown-Séquard had charge of her nervous system, that Dr. Williams attended to her lungs, that her abdominal organs were entrusted to Sir William Gull, that Mr. Spencer Wells looked after her rectum, and that Dr. Walshe had her heart. If some adventurous doctor should determine to start a new specialty, and open an institution for the treatment of diseases of the umbilicus—the only region which, as my colleague, Mr. Simon, says is unappropriated—I think I can promise him more than one patient."

Relation between Warts and different Forms of Cancer.—At the late meeting of the British Medical Association, Dr. S. M. Bradley read a paper in which he attempted to establish the essential oneness in origin of all morbid growths characterized by the abnormal development of epithelial elements, such, *e.g.*, as scirrhus, epithelium, epulis, and common warts. The author stated that the simplest of these tumors may evolve the more complex by the agency of external forces, such as irritation, pressure, etc. (the influence of heredity is probably always great in determining the exact nature of the morbid product); and that the power and rate of infiltration and invasion of the general system is due to simple laws, such as the size and shape of the cells, their degree of moisture, and the nature of the surrounding tissues. He maintained that, as electricity, by coagulating the albumen of a part, establishes a barrier to the onward march of the cell-elements, it should therefore be employed in all cases of infiltrating tumors when it is decided to eradicate the growth.—*British Med. Jour.*

The New York Society of Neurology and Electrology.—The purpose of this Society is the study of the Anatomy, Physiology, Pathology, and Therapeutics of the Nervous System, and of Electricity in its relations to Physics, Physiology, and Therapeutics.

The following are the officers: *President*, Meredith Clymer, M.D.; *Vice-President*, Austin Flint, M.D.; *Recording Secretary*, Alfred L. Carroll, M.D.; *Corresponding Secretary*, John J. Mason, M.D.; *Executive Council*, Austin Flint, M.D., John C. Dalton, M.D., D. B. St. John Roosa, M.D., George M. Beard, M.D., Edward T. Loring, M.D., the President and Recording Secretaries, *ex-officio*.

The following are the Standing Committees:—*Anatomy and Histology of the Nervous System*, I. W. S. Arnold, M.D., Edward T. Janeway, M.D., Edward C. Seguin, M.D.; *Physiology and Pathology of the Nervous System*, John C. Dalton, M.D., D. B. St. John Roosa, M.D., Edward G. Loring, Jr., M.D.; *Psychology*, Meredith Clymer, M.D., Ralph L. Parsons, M.D., John O'Dea, M.D.; *Electro-Physics and Electro-Physiology*, John J. Mason, M.D., Alfred L. Carroll, M.D., Wm. R. Fisher, M.D.; *Electro-Therapeutics*, George M. Beard, M.D., John Byrne, M.D., A. D. Rockwell, M.D.

Medical Schools and Graduates.—There are in the United States, according to Dr. Toner, 101 medical teaching bodies, classified as follows: Regular medicine, 77, of which 16 teach pharmacy; 8 Homœopathic, 8 Dental, 6 Eclectic, and 2 Botanic.

The annual accession to the ranks of the medical profession through American colleges is, Doctors of medicine, 1,698; *Ad eundem* degrees, 79; Honorary, 16; and 5,776 matriculants attending college. He says, if the returns were complete from all colleges, it would probably reach 2,000 graduates, and perhaps 6,500 in attendance on lectures.

The whole number of the medical profession of the United States numbers 62,383.

Medical Department of Life Insurance.

AN INQUIRY INTO THE CAUSES OF 1,000 DEATHS,

BEING THE MORTALITY EXPERIENCE OF A LIFE INSURANCE COMPANY IN THE CITY OF NEW YORK.

By ALBERT H. BUCK, M.D.,

INSTRUCTOR IN OTOLOGY IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

GENTLEMEN:*—At the request of your President I have instituted a careful inquiry into the death-record of this company, from its incorporation in 1850 to the present time—Dec. 27th, 1873. Such an inquiry, it was believed, would, on the one hand, throw light on at least some of the errors of the past, and so enable us to avoid them in the future, while, on the other, it would more clearly define the rules regarding health, personal habits, and family history, in accordance with which a financial success in assuring lives had already been attained. Many of our agents, too, were disposed to consider the rulings of the home office unnecessarily severe, and it therefore seemed very desirable, if possible, to show in the past experience of the company a justification for the course followed.

As a preliminary step to such a study, it was found necessary to gather together into a single volume, in systematic order, all the facts contained in the application, the medical examiner's report, and the "proofs of death" of those who had died during this period. This part of the work has been done in a very satisfactory manner by Mr. J. A. Marsh, of this city, and is submitted herewith for your inspection. The number of deaths involved in this inquiry is one thousand. The causes by which they were encompassed are set forth in the following table:

TABLE I.

	No. of Cases.
Abscess (of arm, parotid gland, and perineum)	3
Anæmia	2
Aneurism	4
Apoplexy	53
Assassination	4
Asthma	2
Bladder, inflammation of	3
Brain, acute disease of	36
Brain, chronic disease of	32
Bronchitis	7
Bowels, inflammation of	24
Calculus (biliary and cystic)	2
Cancer	22
Casualties (war, shipwreck, poison, and drowning)	54
Cerebro-spinal meningitis	7
Cholera, Asiatic	17
Cholera morbus	9
Consumption	268
Delirium tremens	10
Diabetes	7
Diarrhœa	9
Diphtheria	5
Dropsy	20
Dysentery	27
Epilepsy	2
Erysipelas	10
Exhaustion, from undue mental labor	1
Fever, continuous	60
Fever, intermittent and remittent	8
Fever, congestive	10
Fever, yellow	1
Gastritis	9
Heart, diseases of	49
Hemorrhage, internal, from strain	2
Hernia, strangulated	4
Hydrothorax	2
Intemperance (form of disease not stated)	6
Kidneys, chronic disease of	25
Lead disease	1
Liver, abscess of	4
Liver, cirrhosis of	5
Liver, cancer of	2
Liver, diseases of (forms not stated)	27
Lungs, abscess of, from embolism	1
Malignant pustule	2
Parturition	2
Peritonitis	4
Pleurisy	2
Pneumonia	81
Puerperal fever	1
Purpura hemorrhagica	1
Rheumatism, acute articular	7
Scarlatina	1
Small-pox	9
Stomach, ulcer of, with hemorrhage	3
Suicide	19
Sunstroke	2
Unknown (found dead, etc.)	10
	1,000

It will thus be seen that the most fatal element in our list of losses is consumption, which alone has been productive of nearly 27 per cent. of the deaths. The zymotic diseases — intermittent, remittent, scarlet, typhoid, and yellow fevers, small-pox, diphtheria, erysipelas, cerebro-spinal meningitis, cholera, dysentery, and diarrhœa—constitute the second largest group, including 198 cases, or nearly 20 per cent.

Next in order come the various diseases of the brain, such as apoplexy, congestion, inflammation, and softening of the brain, acute mania, epilepsy, and sunstroke. This group numbers 126 cases, or nearly 13 per cent. of the entire mortality. If we add to it the cases of suicide and delirium tremens, the group will number 155 cases, or over 15 per cent.

The acute diseases of the lungs—pneumonia, bronchitis, and pleurisy—constitute the fourth largest group, containing 90 cases, or 9 per cent. Finally, the diseases of the heart and larger blood-vessels comprise 53 cases, or 5 per cent.

Before entering into the particulars of these five groups, allow me to lay before you some statistics collected in the course of the present inquiry. It was found, for instance, that out of the thousand individ-

* This article was originally written as a report to the directors of the company.]

uals whose policies had matured by death, the heights and weights of 742 had been recorded by the medical examiner. As this number did not appear to me to constitute a sufficiently large basis upon which to found a table, I collected from the volumes of the medical examiner's reports the heights and weights of 897 other individuals (all males), thus making a total of 1639 individuals whose average age was nearly 37 years. The table of average heights and weights now in use among all life-companies in the United States is, I believe, a modification of Dr. Hutchinson's table, based upon 2,650 English lives.* The correctness of the modified table for American purposes is fully confirmed by the results of the present investigation, as set forth in the accompanying table:

TABLE II.—Relations of Height to Weight.

(Based upon 1,639 American lives.)

Height.	No. of Indiv. Involved.	Aggregate Weight. lbs.	Average Weight. lbs.	Average Weight (Hutchinson). lbs.	Average Weight (Amer. Standard). lbs.
4 ft. 9 in.	1	121	—	—	—
4 ft. 10 in.	—	—	—	—	—
4 ft. 11 in.	2	235	117	—	—
5 ft.	8	1025	128	—	—
5 ft. 1 in.	6	738	123	120	120
5 ft. 2 in.	14	1770	126	126	125
5 ft. 3 in.	33	4268	129	133	130
5 ft. 4 in.	78	10374	133	139	135
5 ft. 5 in.	91	12452	136	142	140
5 ft. 6 in.	179	25281	141	145	143
5 ft. 7 in.	257	37694	146	148	145
5 ft. 8 in.	334	50678	151	155	148
5 ft. 9 in.	197	30750	156	162	155
5 ft. 10 in.	224	35482	158	169	160
5 ft. 11 in.	102	16913	165	174	165
6 ft.	81	14008	172	178	170
6 ft. 1 in.	20	3462	173	—	—
6 ft. 2 in.	9	1508	167	—	—
6 ft. 3 in.	3	630	210	—	—

Group I.

Diseases of the Heart and larger Blood-vessels.

In stating that there were but 53 cases in this group, I am confident that the number falls short of rather than exceeds the truth. Of the 2 cases of asthma, 2 cases of hydrothorax, 20 cases of dropsy, 25 cases of chronic disease of the kidneys, and 27 cases of disease of the liver, it is highly probable that quite a number were secondary to disease of the heart. The facts stated in the death certificates are not, however, sufficiently explicit for me to venture upon any more accurate diagnoses than those given in Table I.

The average age at death of the entire group is 49 years, distributed among the different periods of life, as indicated in Table III.

It will thus be seen that this form of disease is preeminently one of mature age, 56 per cent. of the deaths having occurred during or after the 50th year of life, and nearly 80 per cent. after the 40th. Another feature of some practical importance is the fact that out of the 49 cases (excluding the 4 cases of aneurism), 15 gave a previous history of "rheumatism." None of these cases made any complaint of palpitation of the heart, shortness of breath, or any other suspicious symptom, at the time they were insured, and it is to be presumed that no physical signs were at that time discoverable which might have thrown light upon the subsequent cause of death. Hence, the only indication of the disease of which they were eventually to die lay in the circumstance of their having had "rheumatism." The fact, then, that 30 per cent. of all our losses through disease of the heart were known, at the time of issuing the policies, to have had rheumatism, would suggest the propriety of making an inquiry into the history of our rheumatic risks, similar to that which has been made in the case of those having a consumptive element in their family histories. (See farther on.) This investigation, however, must be reserved till some future time.

The ages at death of the four cases of aneurism average 50 years.

Group II.

Acute Diseases of the Lungs.

There is very little to say concerning the diseases of this group, except that they carry off some of our healthiest risks in the very prime of life. I know of no way of guarding against loss from this source, except, perhaps, by the exercise of caution in accepting persons whose occupation exposes them to sudden and great changes in temperature. Tables IV. and V. will show the seasons of the year when the disease is most prevalent, and the ages at which it is most likely to occur.

Group III.

Diseases of the Brain and Nervous System. Delirium Tremens and Suicide.

There are several questions of interest connected with the study of this group of diseases, but unfortunately the number of cases which it comprises is comparatively small, and the details of the individual histories are in many instances incomplete. Nevertheless the results are suggestive of certain inquiries that might profitably be made, were the material at one's command larger.

The relative frequency of these different diseases, and their distribution among the different years of the past, are set forth in Table VI.

Leaving out the cases of suicide, and separating the ages into periods of 5 years each, I find the apoplexies, congestions, softenings, etc., of the brain to have been distributed in the manner seen in Table VII.

The height and the weight were recorded in 116 out of the 156 cases. They are noticed in Table VIII.

As to the question of whether the disease was or was not in some instances hereditary, I would reply that in 10 cases the father was known to the company, at the time the policy was issued, to have died of apoplexy or softening of the brain, by suicide or by intemperance; that in 4 other cases the mother was known to have died of suspected brain-trouble; that in 4 others still, a parent, together with a brother or sister, were known to have died from the same causes; while finally, in 6 other cases one or more brothers or sisters were known to have been victims of brain-trouble. Thus it is possible that in a little over 15 per cent. of all these cases there was an hereditary taint predisposing the applicants to the disease of which they eventually died.

* Dr. Hutchinson's table, based upon 2,650 men, is given in the Assurance Magazine (vol. i., London, 1850).
It is as follows:—

Height. Ft. in.	Weight. Lbs.
5 1	120
" 2	126
" 3	133
" 4	139
" 5	143
" 6	145
" 7	148
" 8	155
" 9	162
" 10	169
" 11	174
6 0	178

TABLE III.—Diseases of the Heart and Aneurism.

Ages at Death.

Ages	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	70–74
No. of cases	1	2	3	5	7	5	8	14	5	2	1

TABLE IV.—Acute Diseases of the Lungs.

Prevalence according to seasons.

Months	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
No. of cases	13	15	9	10	7	7	4	3	2	2	10	8

TABLE V.—Acute Diseases of the Lungs.

Ages at Death.

Ages	15–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	70–74	75–79	80–84	85–89	90–4
No. of cases	1	2	7	10	17	13	14	11	4	9	0	0	1	0	0	1

TABLE VI.—Diseases of Brain and Nervous System, Delirium Tremens, and Suicide.

Year.	Congestion of brain.	Apoplexy	Softening.	Inflammation of brain.	Chronic disease of brain.	Insanity.	Acute mania.	Nervous prostration from overwork.	Epilepsy.	Cancer of brain.	Abscess of brain.	Suicide.	Del. tremens.	Totals.
1850	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
1851	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0
1852	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
1853	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2
1854	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2
1855	1	1	.....	2	2	.....	1	.....	1	.....	.....	.....	.....	8
1856	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
1857	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2
1858	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	3
1859	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2
1860	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
1861	1	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
1862	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	5
1863	.....	3	2	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	6
1864	2	1	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	5
1865	.....	6	3	1	.....	.....	.....	.....	.....	.....	.....	1	1	12
1866	1	7	1	1	.....	1	.....	.....	.....	.....	.....	1	.....	12
1867	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	4
1868	2	4	4	3	.....	1	.....	.....	.....	.....	.....	.....	1	15
1869	1	3	1	.....	1	2	.....	.....	.....	.....	1	4	.....	13
1870	1	3	.....	.....	1	2	1	.....	.....	.....	.....	3	.....	11
1871	2	5	1	2	.....	.....	1	.....	.....	.....	.....	3	1	15
1872	1	8	2	1	.....	1	.....	.....	.....	.....	.....	1	1	15
1873	1	4	4	1	1	.....	.....	1	.....	.....	.....	3	.....	15
Totals.	19	53	20	14	5	8	3	1	2	1	1	19	10	156

TABLE VII.—Diseases of Brain and Nervous System.

Ages at Death.

Ages	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	70–74	75–79
No. of cases	2	6	9	19	26	22	22	14	12	2	2	1

TABLE VIII.—Diseases of Brain and Nervous System.

Relations of Height to Weight (116 cases).

Height	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	5.10	5.11	6 ft.	6.1
Weight	127	—	132	137	144	159	157	157	166	160	172	181	145
American standard	120	—	130	135	140	143	145	148	155	160	165	170	—

TABLE IX.—Suicides.

Ages at Death.

Ages	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59
No. of cases	1	2	4	2	4	4	1	1

TABLE X.—Suicides.

Modes of Death.

Modes of Death	Jumping out of window.	Drowning.	Stabbing.	Strychnine.	Cutting throat.	Shooting.	Hanging.	Not stated.
No. of cases	1	2	1	2	2	3	4	4

TABLE XI.—Continuous Fevers.

Ages at Death.

Ages	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69
No. of cases	2	8	5	8	8	9	6	4	7	2	1

In 18, or a little over 11 per cent. of the cases, the family history was tainted with consumption. In 22, or 14 per cent. of the cases, the applicants had been at some previous time afflicted with "rheumatism."

The suicides are grouped in the foregoing manner according to their ages and methods of destroying life. (Tables IX. and X.)

Group IV.

Zymotic diseases: Typhoid fever, scarlet fever, yellow fever, intermittent and remittent fevers, cerebro-spinal meningitis, cholera, erysipelas, puerperal fever, diphtheria, small-pox, diarrhœa, and dysentery.

The recent epidemic of yellow fever in some of the South-western cities has been seriously felt by some of our neighbors, but as our own company has never issued policies on persons residing in the Southern States, except in isolated cases, it is not surprising that there should have been but a single death from that disease. The epidemic referred to, however, would probably not have proved so fatal to the better classes, had not the cities in which the disease prevailed been in such a deplorable sanitary condition. In the future it would perhaps be to the company's interest to note the sanitary condition of the towns and cities in which their policy-holders live, for the purpose of bringing influence to bear in favor of sanitary reform where such seems to be needed.

In regard to the continuous fevers, such as typhus and typhoid, a glance at Table No. XI. will show that among our policy-holders no period of life has been specially liable to these diseases.

The only provision that can be made by the company to avoid an excessive mortality from this source is by not issuing policies, at least on the life plan, to men whose pecuniary circumstances compel them to live in the crowded tenement houses of our large cities.

Group V.

Consumption.

Our "proofs of death" are not sufficiently accurate to enable me to make a distinction between tubercular disease of the lungs and chronic bronchitis,—a form of disease so nearly like the tubercular variety in all its outward manifestations that I scarcely believe it will ever be possible in insurance statistics to call it by any other name than consumption. For practical purposes, however, it is not necessary to make such a distinction.

Consumption has at all times in the history of the company been the cause of a large percentage of its losses, no less than 268 or nearly 27 per cent. of the entire number of deaths having been due to this disease. The yearly losses from this source are seen in Table XII.

The first thing here that attracts our attention is the fact that while the mortality from consumption in the country at large is only 15 per cent. of the entire mortality, in the community of policy-holders—all se-

TABLE XII.—CONSUMPTION.

Number of deaths according to years.

Year.	Total Number Deaths.	Deaths by Consumption.	Percentage.
1850	3	....	....
1851	5	....	....
1852	38	....	....
1853	24	6	25
1854	25	7	28
1855	29	5	17¼
1856	16	7	43¾
1857	25	6	24
1858	25	10	40
1859	18	11	61⅓
1860	23	7	30½
1861	22	5	22⅞
1862	33	11	33⅓
1863	28	12	43
1864	33	10	30⅓
1865	53	13	24½
1866	57	14	24½
1867	53	15	28⅓
1868	62	16	25⅝
1869	82	23	28 1/2 0
1870	70	27	38½
1871	92	28	30⅜
1872	93	13	14½
1873	91	22	24⅛

lected lives—it is nearly twice as great. It is easy to say that here is *prima facie* evidence of carelessness or incompetency on the part of the company's medical examiners, but it is a very difficult matter, if not altogether impossible, to satisfy the mind of the truth of this. I find, for instance, that out of the 268 deaths by consumption, 153 were originally examined and recommended for insurance by physicians of this city: 124 by Dr. James W. G. Clements, for nearly 20 years the medical director of the company, and 29 by Drs. Edward Fields, Wm. Macneven, J. W. Scott, George P. Cammann, John T. Metcalfe, Minturn Post, S. Conant Foster, and Charles D. Smith.* The 29 deaths that occurred among those examined by the eight gentlemen last mentioned, represent, in proportion to the total number of examinations made by them, a greater mortality from consumption than do the 124 originally recommended by Dr. Clements; and yet some of these men are—or were during their lifetimes—widely known as experts in physical diagnosis. I mention these points in order to show that the excessive mortality from consumption—at least so far as the New York risks are concerned—has occurred not through incompetency or carelessness on the part of the examiners, but rather in spite of the carefulness and skill which we have every reason to believe these men exercised.

As to the remaining 115 deaths from consumption, I am unable to arrive at any special conclusions why here, too, the mortality should have been excessive. I would call attention, though, to the fact that this mortality, in proportion to the total number of examinations made, is decidedly heavier than that which has occurred in this city and vicinity.

Before theorizing any further on this question, let us glance at some of the facts that may be gathered from a closer study of these 268 deaths. In the first place, we find that the average age at which they insured their lives is 34 years, whereas the average age at which the remaining 732 became insured is 38¼ years. The average age at death of the 268 is 39 years, while among the other 732 it is 44 years. In 76 cases (29 per cent.) there seems to have been a consumptive taint in the family. These cases are classified in the following table:

TABLE XIII.—CONSUMPTION.

Ages at death.

Degree of Hereditary Taint.	No. of Cases.	Average age at death.	Average age of parents at death.	Average age of brothers and sisters at death.
Hered. by mother and father, and one or more brothers or sisters	2	51¼	48¼	..
Hereditary by the mother and father	1	48	61	..
Hereditary by the mother	18	39	43⅛	..
Hereditary by the father	13	38	36	..
Hered. by the mother and one or more brothers or sisters.	10	45¼	56¼	26
Hered. by the father and one or more brothers or sisters.	2	39	51	40
Hereditary by one or more brothers or sisters	30	41	..	31
Totals	76	41	45	30

TABLE XIV. — DEATHS FROM CONSUMPTION AMONG THOSE WITH A DOUBTFUL* FAMILY HISTORY.

Ages at death.

Degree of Doubtful Taint.	No. of Cases.	Average age at death.	Average age of parents at death.	Average age of brothers and sisters at death.
Hereditary by the mother	34	39	43	..
Hereditary by the father	14	42	49	..
Hereditary by one or more brothers or sisters	17	44		27
Totals	65	41	44⅜	27

It is a fact well known to the officers of insurance companies that the terms "childbirth," "change of life," "exposure," "grief," "fever," "inflammation of the lungs," and "general debility," used by the applicant to designate the cause of death of some member of the family, are in many instances synonymous with consumption. This is particularly true of the applications for insurance that come from agents in the country. Physicians who make but half-a-dozen examinations in a year are slow to learn the importance

* The writer at first doubted the propriety of mentioning names, but finally concluded that a record of a service so successful (as will be seen farther on) and also so creditable to the gentlemen in question, deserved to be made public.

* The causes of death, as stated, being "childbirth," "change of life," "fever," etc.

TABLE XV.—CONSUMPTION.

Ages at death.

Ages	15–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	70–74	75
No. of Cases.	3	9	22	55	62	43	36	21	9	4	2	1	1

TABLE XVI.—CONSUMPTION.

Relations of Height to Weight. 209 Cases.

Height.....	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	5.10	5.11	6.00	6.1	6.2	6.3
Weight.....	116	...	112	128	133	134	141	143	148	148	148	145	161	160	185
American standard	120	...	130	135	140	143	145	148	155	160	165	170	...	...	...

of a thoroughly sifted family history. I believe it is no exaggeration to say that about half of these cases would prove, upon careful inquiry, to have been genuine cases of consumption. With this in view I have constructed Table XIV., which shows that in an additional 24 per cent. of the deaths there was a doubtful family record.

It will, therefore, not be far from the truth to say that in about 40 per cent. of our consumptive losses the taint in the family history played an important part in determining the eventual cause of death. Further on I shall revert to this question and follow it out more closely.

The ages at which these 268 consumptives died are arranged in periods of five years each, as seen in Table XV.

From this table it will be seen that 60 per cent. of the deaths occurred between the ages of 30 and 45, or 78 per cent. between the ages of 30 and 50.

Our only way of judging of the physical condition of the 268 at the time they were insured is by ascertaining their average heights and weights at that time. On investigation, however, I find that the heights and weights, as ascertained at the time the policies were issued, have been recorded in only 209 instances. In these cases the average weights for the different heights are as seen in Table XVI.

As it is not likely that the weights of the remaining 59 cases would materially disturb the averages here given, I believe we can safely assume that these results represent correctly the average heights and weights of the entire group. Here, then, we find a second important general characteristic of these consumptive cases—a tendency to leanness, especially noticeable among the tall individuals of the group. This diminution in weight is even more marked than is the increase among the group of diseases of the brain and nervous system. Until we shall have reversed the investigation and ascertained what has been the mortality among all, or at least a large number, of our lean risks, it would not be safe to lay down any general rule regarding them. It is evident, though, that this class of risks must be accepted with caution.

An investigation into the physical histories of the group prior to insurance reveals only two points of interest: 7 per cent. of the number had been more or less subject to "rheumatism," and 5 per cent. had previously had "spitting of blood."

So far then as we have gone in this inquiry, the results obtained would seem to indicate the necessity for separate inquiries in regard to the mortality among—

1. Those who have had "spitting of blood," and those who have had a consumptive taint in their family histories;

2. Those who have been over or under the standard weight; and

3. Those who have had "rheumatism."

The last two of these inquiries will have to be postponed till some future time.

(To be continued.)

MORAL HAZARD IN LIFE INSURANCE.

THE heavy losses to which life-insurance companies are annually subjected from suicide, intemperance, and general recklessness of life, suggest the idea that far too little importance is ordinarily attached by the parties in interest to the moral hazard of the risks they assume.

The following extract from a forthcoming revised edition of "Instructions to Medical Examiners," will serve to show what is here referred to: "In addition to a sound physique, and an unexceptionable family record, medical examiners should also inquire into, and duly appeciate, the moral hazard attending any case which may present itself. Thus, for example, if the occupation, mode of life, social position, financial condition, domestic relations, or any other circumstance connected with the applicant's history be such as to render him indifferent to or reckless of life the fact should always be fully and clearly set forth, as having a most important bearing in determining the character of the risk. No one can be regarded as safely insurable if the desire for life, or the motives for living, have in any wise or to any extent been removed, and considerations of delicacy should not prevent the medical examiner from mentioning such facts when he has reason to suspect their existence."

This subject, which is one of importance, should commend itself to all persons interested in the success of legitimate life insurance, and caution and attention just here might be the means of preventing many an unnecessary loss which would otherwise arise. It is not proposed to pursue this subject further at this time than to remark, that the fact of men of limited means seeking to effect insurance on their lives to an amount far beyond their ability to carry, should of itself excite suspicion, and lead to an inquiry whether the object be not really to speculate on these beneficent institutions, rather than for legitimate purposes. It is

unfortunately true that men of lax moral principles, whose impaired fortunes may have rendered them reckless as to life, will sometimes prefer to provide for their dependent families by the proceeds of a life policy, rather than by trusting to the uncertain chances of attempting to retrieve their desperate fortunes from the proceeds of honest industry. Such persons too often swell the list of unfortunate suicides, and by preventing their fraudulent designs, we may not only protect life-insurance companies, but at the same time interpose a barrier against the horrible crime of self-destruction.

A MEDICAL DIRECTOR.

ST. LOUIS, Nov. 26, 1873.

ON THE RELATIVE INFLUENCE OF CITY AND COUNTRY LIFE ON LONGEVITY.

(EXTRACTS FROM A PAPER READ BY JOHN STOCKTON-HOUGH, M.D., BEFORE THE PHILADELPHIA SOCIAL SCIENCE ASSOCIATION, 1873.)

IN our theme to-night we have to do with the ill effects on health, mortality, and longevity, arising from prolonged or continuous life in cities. And these effects can best be shown and appreciated by comparison with the much more favorable results of life in the country.

On these several conditions hang the fates of principalities and powers. Well and truly has the Roman poet said: "*Pericula mille sævæ urbis*"—a thousand perils beset the great city,—and these words have as much weight and meaning to-day as they had centuries ago.

On the other hand, the unsparing praises of life in the country, with its attendant happiness, healthiness, and purity, found in the poems of Virgil, Horace,* and Cowper,† are not less worthy of our careful consideration and thoughtful reflection.

The speaker in the course of his statistical researches has so frequently observed the ill effects of city life, that he was led to inquire whether the noticeable decline in health, fecundity, and longevity of the human race, and of the American people in particular, were not due to the too great crowding into cities; and he finds from an investigation of the subject that he is warranted in his belief.

That there is a well marked and fully appreciated decline in the health, fecundity, and longevity of the people of the United States, we have only to refer to the investigations of those of our fraternity who have given the subject much thoughtful attention, and are undoubtedly well able to judge. Among these, I may mention Dr. Nathan Allen, of Lowell, Massachusetts; Dr. J. M. Toner, of Washington, D. C.; Dr. John S. Parry,* of Philadelphia, and the late lamented Dr. Hunt,† President of the London Anthropological Society.

These men are all habitually careful, thoughtful, and, moreover, conscientious in the expression of their opinions; and we are forced to accept the weight of their evidence, however humiliating, as regards our future prospects as a nation.

Dr. Parry believes that "it may yet become a serious question, whether the Anglo-Saxon race is adapted for life in this country with its variable climate; and it may yet become a very serious question, whether the American will become a permanent nation, if immigration is cut off, for it is beyond doubt that though our people are not physically weak, the number of children born to native parents is small, and is decreasing every year. This is true not only of those families who have lived in this country for three or four generations, but it is more or less true of the immediate descendants of our Irish and German immigrants."

If William Barton were living to-day, he would find his predictions of fertility, longevity, and increase of our people had fallen sadly short of his high hopes, as expressed in a letter to David Rittenhouse, dated March 17th, 1791, "On the Probabilities of the Duration of Human Life in the United States of America."‡ He calls attention to the fact of the population having doubled in fifteen years; while at the present time it will take more than twice that length of time to increase the population to the same extent, and this is only 82 years ago.

He attributes this unparalleled increase to the early marriages,§ virtuous habits, and simple manners of the people. The lack of large cities did not escape his notice, for he compares the unfavorable circumstances connected with city life with the healthful employments of the country.

The average duration of human life in Philadelphia near the close of the 18th century was above 28 years, now it is but 24.5 years.‖

Notwithstanding the fact that the mean average duration of human life has decreased apparently 3.5 years in our city (though in reality more), yet, strange to say, there is one person in every 33 of those dying who attain to 80 years and above, among those dying from

---

* This used to be my wish: a bit of land,
A house and garden with a spring at hand,
And just a little wood. The gods have crowned
My humble vows; I prosper and abound.
Hoc erat in votis.—Sat. VI., B. II.

* * * *

The farmer dragged to town on business, swears
That only citizens are free from cares.—*B. I., Sat. I.*

* * * *

And courts and levees, town-bred mortals' ills,
Bring fevers on and break the seals of wills.
Quumque dies tibi pollicitus.

† Strange! there should be found,
Who self-imprisoned in their proud saloons,
Renounce the odors of the open field
For the unscented fictions of the loom;
Who, satisfied with only pencilled scenes,
Prefer to the performance of a god.—*The Sofa.*

* * * *

God made the country, and man made the town,
What wonder then that health and virtue, gifts
That can alone make sweet the bitter draught
That life holds out to all, should most abound,
And least be threatened in the fields and groves.
—*The Task.*

But though true worth and virtue in the wild
And genial soil of cultivated life
Thrive most, and may perhaps thrive only there,
Yet not in cities oft; in proud, and gay,
And gain-devoted cities. Thither flow,
As to a common and most noisome sewer,
The dregs and feculence of every land.
In cities foul example on most minds
Begets its likeness. Rank abundance breeds,
In gross and pamper'd cities, sloth, and lust,
And wantonness, and gluttonous excess.
In cities vice is hidden with most ease,
Or seen with least reproach; and virtue, taught
By frequent lapse, can hope no triumph there
Beyond the achievement of successful flight.—*Task.*

---

* John S. Parry, M.D., "Infant mortality and the necessity of a foundling hospital in Philadelphia." Papers of the Social Science Association of Philadelphia, 1871, pp. 28, out of *Penn Monthly*, 1871.

† James Hunt, Ph.D. The influence of the climate of North America on the physical and psychical constitution. Reviewed, in No. 1, *Anthropological Review*, London, May, 1863, p. 18.

‡ Published in the Transactions of the American Philosophical Society, vol. iii., pp. 25 to 62, 1st Series (Philadelphia).

§ William Penn, in a letter to his friends in England, says that there is scarcely a maid of nubile age unmarried in the Province of Pennsylvania. Need I say how different it is now? How many men and women remain unmarried!—*Watson's Annals of Pennsylvania.*

‖ See further in the author's paper on "Statistics Relating to Births, Marriages, and Deaths in Philadelphia for the eleven years ending December 31, 1872."—*Penn Monthly*, Sept. 1873, p. 24.

1860 to 1872; while there is but one in every 38 in the period from 1820 to 1830, and only one in every 40.8 for the years 1789 and '90,—above the age of 90, however, there was a larger proportion in the earlier periods than at present.

The fact of there being a larger *proportion* of persons above 80 years of age among the decedents in recent enumeration than among those taken some years previous, has furnished a foundation, in fact, on which some exceedingly clever men have based erroneous conclusions,—among which I may mention the seeming inference that the *average duration* of human life has increased.

Now this fallacy happens in the following manner, viz.: A certain proportion of those dying in the extreme ages mentioned are exogenous, having come to the city in late adult or advanced age, and though they contribute to swell the number, and consequently increase the proportion in extreme ages, yet their number is not sufficient to very materially affect, though falsely increasing, the mean average duration of human life, on account of the immense numbers dying in infancy and inferior ages. The reason that there was a larger proportion among the decedents of extreme ages in the decade from 1860 to 1871, than the decade between 1820–30, was because there was a larger proportion of persons of advanced ages coming into the city in the first-named decade than in the last. In the ten years from 1860 to 1870, 91,674 persons, strangers from other places, took up their residence in Philadelphia, and by far the greater part of them were adults. This paradoxical contradiction is repeated in respect to the poor of cities, among whom, though the mortality be greater and the average duration of life less than among the rich, yet they have a larger proportion of decedents of extreme ages than the latter class.

The fault of overcrowding cities with idlers is a *mere matter of fashion.* In America it is the fashion to live in cities. In England it is equally the fashion to live in the country. Yet there is a reason for this fashion—and it is principally a matter of money. We Americans have not wealth enough to live in the country—though it may seem paradoxical to say that it costs more to live in the country than in the city—but I mean to live fashionably, which must always include a town-house. In short, the people in America are utilitarians as yet, are too busy in making money, and have no time to do visiting at distances, and as a consequence country people would have no social life; their wives would have but one man to dress for, their daughters would languish in listless maidenhood, and their sons grow dull with *ennui.*

After a time, with more wealth, and when land is scarce and dear, it will become fashionable to have landed estates as the most solid and satisfactory investments. Thus, if not too late, we may reasonably hope that our citizens will be aroused to their interests and that of their posterity.

As a further evidence of more rapid physical degeneracy in great cities than in country districts, the *decline in stature* is a proof. Dr. J. Adams Allen* says: "In the United States the average height of persons bred and living in large towns and cities is something less than that of those living in rural districts." This fact is so noticeable that it need not be attested by actual measurement.

The most trying time for children in cities is during the intensely hot weather of the summer months, as may be seen from an examination of Dr. Russell's comments † on the dreadful mortality of children in New York City, for the week ending July 6, 1872. During this week there were 1591 deaths in all, 229 more than ever before registered. 1,007 or 63.2 per cent. of these, were children under 5 years of age; and 45 of persons above 70 years of age. Of 1,007 infants under 5 years of age, who fell victims to diarrhœa, 499 were under 1 year, and 604 under 2 years.

The total mortality from diarrhœa was 653, or 41 per cent. of the deaths from all causes. Of the 2,351 deaths from all causes in the month of July, 140 were of diarrhœal affections, and 102 of diseases of the nervous system.

Intense heat, bad food, and foul air appear to be the principal predisposing causes to this extraordinary mortality. The "Free Camping Grounds and Sanitariums" recommended by Dr. Toner are assuredly worthy of consideration in this connection, as offering a means of obviating a large part of this extraordinary mortality.

In the United States (1860) there was one death to every 78.32 inhabitants, in 1870 one to every 79.77; while in New York City (1870) there was one death to every 39.3 inhabitants. In Philadelphia, 1861 to 1871, one death to every 39.1 inhabitants. Gen. Walker* gives the mean average duration of human life in the United States (1870) at 39¼ years, while in New York and Philadelphia it is only 23 years, or 16 years less.

The mortality of great cities is found to be, both in this country and in Europe, more than twice as great as that of the rural districts; indeed it is fully 2½ times as great, for the cities are counted with the country in those comparisons, thus reducing the difference in their favor, and moreover, the mean average age at death in cities is falsely increased by the fact of the exogenous population of towns having passed the most critical period of their lives in the country.

On inquiry into the causes of the greater mortality of cities than rural districts, we find that circumstances connected with poverty are most noticeable, for in Philadelphia, during the 10 years ending 1871, I found that there was but one death to 57 inhabitants in the richest ward, though not exclusively inhabited by that class, and 1 death in every 42 inhabitants in the next richest ward, while there were but 36.50 inhabitants to every death, in the poorest ward, and there were but 4.86 persons to each family, and 5.04 persons to each house, here; while there were 6.23 persons to each family, and 7.04 inhabitants to each house in the richest.

Similar differences were found in Boston, in 1870, the year of the census.

Large towns have been emphatically called the *graves of humanity*, and certainly they are not favorable to health and longevity. Indeed, they might be very properly compared to the fiery furnace, into which the condemned children were cast.

Those who would live to a good old age, and hand their names down through a numerous posterity in children endowed with rich mental gifts, should avoid the dangers of the great city and choose the country life.

Deaths from Cancer.—Among the 23 deaths from cancer, which have occurred during the past 24 years in the experience of one of our life-insurance companies, only one seems to have been hereditary. In this case the only other member of the family who appears to have had the disease was a sister.

* Medical Examinations for Life Insurance, Chicago, 1867. 8vo.
† *New York Medical Record*, p. 333. 1872.

* Gen. Walker, in his address before the American Public Health Association, Nov. 12, 1873, said that he estimated the deficit in the returns of deaths in the census of 1870 at 33 per cent.

Original Communications.

TWO CASES OF FIBROID GROWTHS UPON THE VOCAL CORDS.

TREATMENT BY EXCISION AND EVULSION.—CURE.

By GEORGE M. LEFFERTS, M.D.,

LATE CHIEF OF CLINIC TO PROF. STOERK IN THE IMPERIAL UNIVERSITY OF VIENNA; SURGEON TO THE DEMILT DISPENSARY, ETC.

CASE I.—I. G. S., aged 31. Patient states that one year ago he had a severe cold, with cough, which lasted several weeks, and that the hoarseness which developed itself at that time, and which he had never before noticed, has gradually increased up to the present date, but that he has never suffered from complete loss of voice. His respiration has at times been affected, especially after prolonged exertion, but never to any marked degree.

He has occasionally had a cough, with expectoration of thick, grayish mucus. Deglutition has not been affected and his general health has remained good. Examination of his lungs shows them to be free from all disease. Has never had syphilis. At the time of the above attack he was treated for the hoarseness with medicated inhalations, but without relief. No laryngoscopic examination was made.

During the last two months his hoarseness has grown so rapidly worse that he is now nearly aphonic. On laryngoscopic examination I found a fibroid polypus of a bright-red color, and the size and form of a small cherry-stone, situated upon the free edge of the left vocal cord and partly overlying its superior surface. Its short pedicle was attached to the cord at the junction of its middle and anterior thirds. The neoplasm projected into the opening of the glottis, and, on attempted phonation, was seen to impinge against the opposite vocal cord, so that neither cord could advance completely to the median line, an elliptical opening remaining between them.

The true cords were congested and relaxed, the false cords swollen; and the mucous membrane throughout the larynx was hyperæmic and covered by a thick, tenacious mucus.

On the same day that the examination was made an immediate attempt at removal of the growth, without previous training of the larynx, was made, as advised by Prof. Stoerk, but was entirely unsuccessful, owing to the great irritability of the patient's throat. As immediate forcible spasm of the glottis followed each introduction of the instrument, after two or three trials the attempts were discontinued.

The following day an ordinary laryngeal sound was passed several times at short intervals, down upon the polypus; and the larynx in this case became so quickly trained to bear the use of instruments, that the operation for removal was at once proceeded with.

The instrument used was the guillotine of Prof. Stoerk, of Vienna, as recently modified by him, and which in its new form has not as yet, I believe, been described in the American journals. The modification consists in leaving the round fenestrated knife, which is ground plane on one face and concave on the other, and which was formerly entirely covered and concealed by a frame supporting it on both sides, unguarded except at its upper part, where it is covered by a small crescent-shaped sheath, attached to the end of the tube of the instrument.

The handle and mechanism of the modified guillotine are the same as in the old form, viz.: the tube of the instrument, bent at an angle of about 120°, terminates at one end in the crescent-shaped expansion mentioned above, which covers the upper third of the fenestrated knife; its other end is inserted into a handle provided with three rings, situated one above, one below, the third at the extremity of the handle.

The index and middle fingers having been inserted through the two first rings, the thumb is passed through the third, and by means of a simple closure of the hand the rings are drawn towards each other, and the knife-blade, connected with the rings by means of a wire passing through the tube, is drawn upwards until its inferior concave cutting edge meets the concave edge of the protecting sheath above, thus first clamping and then cutting through any growth which may have been introduced into its fenestrum.

The advantages claimed by Prof. Stoerk for this modified form over the old guillotine are: *

1*st.* That it is much lighter and occupies less room in the larynx, and in this lighter and more elegant form is much easier of adaptation to small growths, which were always difficult to seize with the heavier instrument. For large growths which have to be crowded into the fenestrated knife and require considerable force to cut them through, the large protected blade, supported on all sides by a circular sheath, or one of the many forms of écraseur, must be used, and have shown themselves thus far to be the most suitable.

2*d.* That the protecting sheath of the knife in the old form covered a certain portion of the growth when placed in position over it, and thereby prevented its entire and complete removal at one operation; whereas with the new guillotine, the sheath being entirely dispensed with except over a small part of the knife above, the blade *itself* may be firmly pressed over the growth, and even be made to cut a line or two deeper into the vocal cord or part on which the polypus sits, in order that the operator may be certain that he has removed the entire base of the neoplasm. To do this, firm pressure is necessary; for the deeper the parts surrounding the polypus are pressed back, the further forwards into the fenestrated knife the body to be extirpated will come, and the less will remain behind of the pedicle or point of insertion, which fact will prove of great advantage during the process of healing.

3*d.* That when growths are situated on the vocal cords, near the anterior commissure of the larynx, the size of the sheath in the old form of instrument prevented its being passed between the growth and the commissure so as to encircle the polypus, thereby rendering the instrument useless for growths so situated. In the modified form, however, the light steel knife-blade presents no such obstacle. This modified instrument having been carefully passed into the

* Stoerk. Laryngoskopische operationen. Wien, 1872.

larynx in the above case, the patient was directed to take a deep inspiration, the glottis being thus well opened and a clear view of the growth, projecting as it did from the cord, obtained, after one or two unsuccessful attempts the fenestrated blade was pressed over it, and on being drawn up, cut the growth cleanly from the cord at its base.

The slight hemorrhage which followed ceased spontaneously in a few moments, and a few hours later it was hardly possible to recognize the former seat of the growth, the clean incision leaving no ragged edge or excavation to mark its site.

The following day the patient reported that his voice had improved markedly and was clearer than it had been for months; a laryngoscopic examination showed that the closure of the vocal cords during phonation was accurate and close.

A subsequent examination, three days later, showed that a very slight degree of inflammatory action had followed the operation and was confined to the left cord; a small ulcer, covered by healthy granulations, marked the former site of the polypus; voice remained clear and had improved in power. The remaining treatment of the case was directed mainly against the catarrhal condition of the larynx. The cause having been removed, this rapidly improved, and the following week the patient was discharged cured.

In concluding the history of this case it may be remarked, that only those growths which, from their situation on the free edge of the vocal cords, or which, from their particular location, project into the cavity of the larynx, and which are of a size to allow of either a partial or complete seizure within the fenestrum of the knife, are adapted for operation with the guillotine. Growths in other situations, such as the one in the following case, require the use of some other form of instrument.

In the practical application of the guillotine, care must always be taken to place the blade in the sheath in such a manner that the plane side of the knife be presented towards the side of the larynx on which the growth to be extirpated has its location; for the concave ground side does not permit of so exact an adaptation to the parts as its fellow, and hence the incision would probably not have the desired nor requisite depth to completely remove the neoplasm.

In comparing the relative merits of the guillotines of Stoerk and of his predecessor, Türck, it will be found that the former possesses many advantages over the latter, not only in form, but also in mechanism and the completeness with which the knife removes the growth. In Türck's guillotine* the knife is completely guarded by a heavy frame made either square or rhomboidal in shape, and therefore presenting angles which cause more or less irritation of the laryngeal mucous membrane during introduction into and withdrawal from the larynx. The knife, either lancet-shaped or with only one cutting edge, acts by being *pressed forwards*, and will be found practically rather to *hack* the growth than cut it through by one clean incision, the chances of which result are also much diminished by the fact that only one cutting edge presses upon the growth, while with the instrument of Stoerk it is encircled by a blade, which acts by being drawn upwards into its sheath, and the round and light form of which presents no difficulty nor obstruction either in its introduction or withdrawal.

CASE II.—J. P., aged 26. In January, 1871, patient, while drinking a glass of beer, suddenly felt an obstruction in his throat. Believing that he had swallowed some foreign body, he introduced his finger into his throat as far as possible in order to remove it; this act was followed by vomiting, during which the sensation passed away. At this time he had neither difficulty of breathing nor cough, nor had he previously noticed any alteration in his voice. Immediately after, however, he observed that his voice was daily becoming weaker. The feeling as if a foreign body were in the throat returned at times, but the sensation was never as marked as on the first occasion. Respiration and deglutition have remained normal, and the patient has had no pain. The weakness of the voice increased at times even to complete aphonia. A physician was consulted a few days after the occurrence of the above attack, and examined the patient's throat (no laryngoscopic mirror was used), but discovered nothing; gargles and vapor-baths were recommended.

From this time up to February, 1873, no new symptoms made their appearance. The hoarseness gradually increased, with occasional variations; greater in winter, less in summer. The patient's general health has remained good, and he has been free from any local pain.

In February, 1873, while eating, the sensation as if a foreign body were in the throat suddenly returned. Patient describes the feeling as the same as that which he had at the beginning of his history. He again attempted to remove the supposed foreign body with his finger, upon which he had a severe attack of coughing and spat blood. Since then the hoarseness has rapidly increased, and for the last two months he has been completely aphonic. For the first time he has had pain, constant and aggravated by swallowing; no cough.

Status præsens.—Patient speaks in a whisper. His attempts to raise the voice are in vain. He complains of pain, increased by pressure over the larynx, and of a constant sensation as if some foreign body were lodged in his throat. On examination, pharyngitis; larynx large and well formed; epiglottis congested; false cords swollen and reddened; the vocal cords congested anteriorly. On the right vocal cord, in its middle third, is situated a fibroid polypus the size of a pea; it is almost spherical in form, and of a bright-red color. The pedicle is small, and springs partly from the upper surface and partly from the edge of the cord. The greater part of the polypus projects into the opening of the glottis during inspiration, and assumes a conical form, with its apex directed towards the opposite cord. During phonation the left cord approaches the median line and lies perfectly straight; but the right cord, prevented by the obstruction which the intervening part of the polypus occasions, cannot touch its fellow and shows a concavity. At the same moment the polypus is pressed upwards, and lies to a great extent upon the cords.

The movements of the adductor muscles of the cords are irregular and unequal. Instead of the rotation of the arytenoid cartilages being equal and simultaneous, the left cartilage is rotated much more quickly and energetically than the right, which occasions the left

* Türck. Krankheiten des Kehlkopfes. Wien, 1866.

cord to lie over the median line towards the right side of the larynx. The right arytenoid cartilage revolves more slowly and approaches its neighbor, while the right cord assumes a crescentic shape, insomuch as it is prevented from reaching the opposite cord by the intervening part of the polypus. As the largest part of the polypus lies upon the vocal cords during phonation, and as its base is attached to the upper surface of the left cord, the case is not adapted for operation with the guillotine, nor any of the forms of crushing forceps of Türck. The polypus must be removed on the same principle as if it were a foreign body lying upon the cords; that is, it should be seized from above with the laryngeal forceps and torn from its attachment. The lower portions of the polypus being pressed between the vocal cords during phonation, renders the upper and greater part tense, and thus affords a prominent object for, and a firm hold to, the instrument.

Operation.—A short time was devoted to training the patient's larynx to bear the introduction of instruments. This was done by means of the laryngeal sound, and the desired result was quickly obtained; mainly, however, owing to the fact that on the previous day he had been examined by a number of medical gentlemen, and a tolerance of instruments had been thus established which markedly assisted the operative procedures. The instrument used was the tube-forceps of Türck. After having passed them over the epiglottis, before entering the laryngeal cavity, the patient was directed to phonate E as loudly as possible. By this means the cords were rendered tense and the greater part of the growth forced up upon them, and plainly to be seen; the instrument was then passed quickly down upon it, and on the first attempt it was seized and more than two-thirds brought away within the grasp of the forceps. The remaining portion lay upon the vocal cord, near its edge, and appeared to consist mainly of the pedicle. As this remainder was very small and partly hidden by the small clots of blood which quickly formed, its removal gave considerable trouble, and it was not until after several vain attempts that it was accurately seized and brought away. The hæmorrhage which followed the operation was trivial in amount, and was quickly controlled by means of ice. An examination, made a short time subsequently, showed that the whole of the polypus had been removed, its former seat being indicated by a shallow excavation on the edge of the cord and a small excoriation upon its upper surface. The operation lasted in all three-quarters of an hour.

An examination made two days later, showed a small ulcer covered by a grayish secretion over the site of the polypus, and in its immediate neighborhood were several small extravasations of blood. At this point also the edge of the cord was irregular, some of its ligamentous fibres having probably been cut through. The closure of the cords during phonation was much more perfect, only a very small elliptical opening remaining between them. The voice was clear and had increased in power, and the sensation of a foreign body in the throat had disappeared. The slight degree of inflammatory action excited by the operation was rapidly disappearing.

The subsequent history of the case, with the exception of a slight relapse of the inflammatory symptoms, brought on by exposure, was satisfactory and rapid in its progress towards a complete cure. The case remained under observation for two weeks, during which time the ulcer on the cords was twice lightly touched with the nitrate of silver; but no other treatment was pursued nor considered necessary. The patient's voice improved daily in strength and clearness; and at the last laryngoscopic examination, made before his discharge, the closure of the vocal cords in phonation was seen to be regular, accurate, and close.

A still better instrument than the one used in this case, and which would have been on some accounts preferable had I had them at hand, are the forceps of Mackenzie or Fauvel. The principle is the same as in the tube-forceps of Türck, which were used: the growth is cut or crushed off from its seat, but the form of the instruments renders them much easier to use, and more certain when attempting to grasp the growth. The breadth and strength of the blades in the first forceps makes an operation similar to the above comparatively easy, as they, if once placed near or over the growth and then closed, are almost sure to grasp it, such is the extent of surface which they cover in the larynx. The growth once grasped, is immediately cut or crushed off, and the portion removed comes away enclosed between the blades of the forceps.

The only objection to the instruments is the difficulty, on account of their size and form, in introducing them into the larynx without causing spasmodic action of the patient's laryngeal muscles, and thereby preventing completely, after introduction, any more than a momentary clear view of the growth to be extirpated or the position of the forceps, unless the patient has been previously trained to bear their use.

This objection can be partly remedied by studying well the location and surroundings of the growth before attempting to introduce the forceps; and after the latter are well over the epiglottis, and if possible over the growth, before laryngeal spasm is excited by touching any part of the larynx, carrying them quickly to the desired point, which will in the majority of cases be safely reached, even if the last stages of the introduction be obscured by the closure of the laryngeal walls about the instrument. It may here be remarked that Jelenffsky, of Prague, relies entirely upon his "tactus cruditus" and anatomical knowledge of the larynx, and familiarity with the location of the growth to be removed, when attempting to extirpate it, and does not endeavor to see the point of his instrument after it has once passed into the larynx.

It is, however, needless to say that this latter method of operating cannot be considered as elegant or skilful, nor even safe.

It is of course always to be borne in mind, not only when using the above form of forceps, but also any of the other forms of laryngeal instrument, that the smaller the growth, the greater is the play given to chance in attempting to seize it, and the greater is the amount of manual dexterity required.

The drawings accompanying the histories were taken by me from nature at the time of the operations, and represent accurately the size, form, and location of the growths.

333 West Twenty-Second Street.

ESMARCH'S BLOODLESS OPERATIONS.

WITH REMARKS.

By ROBT. F. WEIR, M.D.,

Surgeon to St. Luke's and the Roosevelt Hospitals.

In a lecture recently given by Prof. F. Esmarch, of Kiel, published in September, 1873, in Volkmann's *Sammlung Klinischer Vorträge*, and subsequently translated in the London *Medical Record* for Oct. 29th, 1873, is given at length a procedure adopted by that distinguished surgeon to prevent loss of blood during surgi-

cal operations. To effect this, the limb—for the method is confined to operations on the extremities, and external male genitals—is enveloped in oiled silk or rubber tissue, and a bandage made of india-rubber webbing is applied tightly from the fingers, for instance, to a point just above the situation of the proposed operation, where a piece of india-rubber tubing is drawn, strongly stretched, around the limb four or five times, and secured by hooks previously fastened into each of its ends. The elastic bandage and oiled silk or varnished tissue-paper are then removed, and the limb is seen as pallid as that of a corpse. The operation is then proceeded with, with probably the loss of not more than a teaspoonful of blood. (In an amputation of the thigh by Dr. Sands, at Bellevue Hospital, a few days since, only 11 drops of blood were lost, by actual count.) This procedure has been used, Esmarch says, by himself for some time,* and although he does not claim the originality of it, as Silvestri, Langenbeck, Stromeyer, Erichsen, and others abroad, and in this city the surgeons of the N. Y. Hospital, had been in the habit of bandaging strongly the limb prior to amputation, first stroking it upwards to empty the veins, yet it is evident that its present perfection is due to him alone. Its merits have been tested in England by MacCormac and others, with excellent results, and in this city first by Krackowizer, and subsequently by others. Here, the rubber-webbing employed has either been such as is used for suspenders, or, what is better, from being thinner and more easily applied, strips of shirred rubber† 1¼ inches wide and 3 yards long. Three of these bandages suffice for a thigh amputation.

For the waterproof varnished tissue-paper used by Esmarch, oiled silk or thin rubber sheeting (not vulcanized cloth) has served as well, nor has it been found necessary to secure the ends of the tubing or solid rubber cord by hooks, as simply securing them by a surgical knot has answered. In contrast to the case of amputation of the thigh by Dr. Sands, mentioned above, another surgeon tried the plan of tightly compressing the limb with ordinary muslin bandages, applying the tourniquet, removing the bandages, and then performing the required amputation. The result showed most decidedly the superiority of Esmarch's method.

This method has been four times resorted to during my present service at St. Luke's Hospital, once for necrosis of the humerus, where nearly the whole length of the bone was removed with loss of, at most, a teaspoonful of blood, where, as a result, the living involucrum appeared nearly of the same whiteness as the dead bone. The operation was completed after Esmarch's plan in such cases, that is, to line the cavity with a layer of gauze, moistened with a solution of chloride of iron; this is packed tightly with German tinder, and in the case at St. Luke's Hospital by charpie soaked in carbolized oil, and the whole limb next enveloped in oiled silk, secured by firm pressure of a gauze carbolized bandage. Not until the dressing is finished is the constricting rubber cord or tubing removed. In this way is the loss of blood reduced to a minimum. Although in amputations such dressings cannot be resorted to, and, as in the second case—amputation at the wrist-joint—it was found that after all the perceptible bleeding-points had been secured and the tubing removed, considerable oozing occurred from minute vessels, just as it would after removal of the ordinary tourniquet. In the other cases, viz., syphilitic necrosis of the radius and Syme's amputation at the ankle-joint, the bloodless character of the operation was also thoroughly maintained.

The experience obtained in London and in this city has already been sufficient to enable the profession to accept the method as a marked surgical improvement, though the restriction placed on its employment by its celebrated promoter,* in cases where there would be danger of forcing septic material into the lymphatic circulation, is eminently just, and should be kept prominently in mind.

19 East Thirty-second Street.

* From January 1 to August 15, 1873, 87 operations, of which 27 were amputations and disarticulations, 8 resections, 13 for necroses, etc.

† To be obtained at Shattuck & Binger's, 18 Spruce st., New York.

* For Silvestri, of Vicenza, had used the rubber bandage and tubing before Esmarch.

FIVE CASES OF CEREBRO-SPINAL MENINGITIS IN THE SAME FAMILY,

PRESENTING PECULIAR PHENOMENA.

By W. W. MUNSON, M.D.,

OTISCO, N. Y.

William S., a large, fat, German boy, aged 16 years, weight 215 lbs., previously healthy, applied to me for treatment Sunday, July 27, 1873, complaining of diplopia and obscure vision, some little pain over the eyes, and slight feeling of obstruction in throat. Not feeling as well as usual for two days past, but has kept at work. First felt a little indisposed Friday, 25th, but worked in the hay-field all day. Was at base-ball play Saturday, 26th, where he seemed to see two balls flying in the air when there was but one. I considered it a case of ordinary cerebral congestion, from being overheated and overworked, and prescribed cathartic at night, bromide potass. gr. xx. in aq. camph., t. i. d., middle of forenoon, middle of afternoon, and at bedtime. Recommended rest and to avoid exposure to heat of sun. Advised him to return in two or three days if no better, and be bled, as this appears to be a proper case for bleeding, if any.

Monday, 28th.—Called to him in great haste, with report that he was choking. See him about 6 A.M., and find that in trying to swallow some water he was strangled by a portion dropping into the larynx. In examining throat in ordinary way—pressing down tongue with spoon-handle—I induced another attack of spasm of glottis, which lasted during four or five respirations. Ask him to swallow some milk, which he does with great difficulty, taking but a few drops at a time—liquid rushing out of mouth and nose if he undertakes to swallow too much. No appearance of disease in throat. Not hoarse. No difficulty in breathing, only when choked by attempting to swallow something. Able to move eyes and eyelids but very little. Can see very well, but everything appears double. Countenance stolid and expressionless, as is the case in double facial paralysis. Can get up and down easily. No loss of use of any muscles other than those about face. No febrile movement. Pulse accelerated, but weak. Evidently great disturbance at origins of cerebral motor-nerves, but I am unable to make the diagnosis, to name the disease, especially as a little sister of his, four years old, begins to present the same symptoms. His physic given last night has not operated. After great effort he swallows another pill. Call for council. Dr. Earl, of Tully, arrives at noon. We cannot make a diagnosis. Send for further council. Patient cannot swallow anything without inducing strangulation. Complete paralysis of muscles of pharynx. Being very plethoric we take a pint or so of blood

from arm, with no apparent effect for better or worse. Little girl's symptoms increasing in gravity—cannot swallow. Dr. Dana, of Cortland, arrives about 5 P.M. The possibility of this being masked diphtheria, in which the nervous centres are overwhelmed without local manifestation, is fully considered, as an endemic of that disease has recently run its course in this section. Not knowing what else to call it, we wash out lower bowel, and administer quinine, tr. mur. iron, and whiskey by rectum in large doses—both patients being unable to swallow. Keep up this treatment through the night.

Tuesday, 29th.—6 A.M., both patients continue to fail. No pain anywhere. Boy unable to move eyeballs or eyelids a particle. Raises lids with hand when he wants to see anything. Sensation in paralyzed parts unimpaired. Intelligence perfect. Recognizes all who come in. Has no use of lips, tongue, or pharynx. Cannot spit, hawk, blow nose, swallow, raise corner of mouth, or use any muscle about head or face. Can turn head slightly. Has perfect use of all other muscles of the body. Pupils greatly dilated. No spasm or contraction—not so much as a quiver of a single muscle. Both children continue to fail during the day. Only one of girl's eyelids paralyzed, but symptoms are generally same as boy's. Inject ½ gr. sulph. strychnia under skin of nucha of boy without response.

The father and mother of these children begin to complain of similar symptoms. Consider their sensations sympathetic, as they keep about, taking care of the children as usual, but give cathartic and tell them to keep quiet. Both children continue to fail, without any new symptoms presenting. Boy dies at 3 A.M., 30th, and girl at 5 P.M. same day, without diagnosis being made.

The parents and another daughter, 17 years old, complain quite seriously of these strange symptoms today (30th); but as they have been constantly watching over the other two for three days and two nights, and they keep up well, I am still inclined to consider their symptoms more sympathetic than real; but Dr. Earl (whom I have to thank for standing by me through this trying ordeal) looks upon them as purporting mischief.

Dr. Benedict, of Syracuse, whom we had sent for, arrived about an hour after the death of little girl, and from our description of the cases pronounced the disease *cerebro-spinal meningitis*. I rebelled against the opinion—could not believe in the existence of meningitis without spasm or contraction, headache or vertigo, pain or hyperæsthesia, delirium or coma.

But on examining upper part of spinal cord of little girl, within two hours after death, we found the dura mater highly congested, vessels of arachnoid and pia mater distended with blood, arachnoid cavity and subarachnoid cavity filled with serum. Brain not examined, as we had, in the condition of the cord, abundant evidence of the nature of the disease.

On carefully examining the other cases, they all complain of diplopia and dysphagia as chief symptoms, although pupils were dilated, tongue coated with a thin translucent pellicle, capillary congestion about face and neck, *slight* tenderness on pressure over nuchæ. They are evidently attacked. On the advice of Dr. Benedict we gave them two drops of croton-oil all around, following, as soon as practicable, with 20 gr. doses of sulph. quinine, alternating with full doses of fl. ext. nux vomica every twelve hours. Blister back of necks and put them to bed.

I at first questioned the use of strychnine, it being such a powerful cerebro-spinal excitant; but as Dr. Benedict correctly remarked, the condition is more of a *congestion* than a true inflammation. The patients were all of that bilious-lymphatic temperament in which the circulation is sluggish. What we wanted was (1st), a remedy to relieve the congestion, which we had in quinine, and (2d), a remedy to *rouse* the circulation in nervous centres—not to reduce it—which we had in strychnine.

Without continuing the history of each case in detail, I will simply state that the daughter was not very sick, and perfectly recovered in ten days. The father became worse. For a few days he could not stir the eyeballs a particle; but he happily passed into convalescence and recovered in about three weeks. The mother also made a good recovery, but her case lingered somewhat longer. In her case double vision was complained of only when she turned eyes to one side. She also had partial loss of power of right arm for a few days. All were constipated. Considerable pharyngeal secretion in all from the start. Throughout their sickness the treatment was essentially as commenced. Necks were kept sore, while quinine and nux vomica were continued to the end.

As far as I am informed, by reading, observation, and inquiry, the phenomena present in these cases of meningitis are unique, all the prominent characteristics heretofore observed being replaced by symptoms entirely the reverse; the most prominent symptom in our cases being *paralysis*, without spasm, contraction, pain, hyperæsthesia, delirium, or coma in a single one of the five cases.

No sufficient cause for the disease in this particular family has been discovered. The family are intelligent Germans. Their house and surroundings are in as good hygienic condition as the majority of farmers' establishments hereabouts. No more cases of the disease have appeared in this section.

Previous to their sickness this family were in the best of health—well known among their neighbors as being specially strong and robust—and consisted of—

Father,	aged	38	years,	weight	210	pounds.
Mother,	"	40	"	"	250	"
Daughter,	"	17	"	"	170	"
Son,	"	16	"	"	215	"
Daughter,	"	14	"	"	207	"
Daughter,	"	4	"	"	40	"

All had the disease except second daughter, who was living away from home at the time the family was attacked, but remained with them during their sickness. The son and youngest girl died.

AN UNUSUAL TYPE OF EPIDEMIC COLITIS.

By S. T. CLARK, A.M., M.D.,

LOCKPORT, N. Y.

DURING the months of August and September of this year (1873), in Niagara County, especially in the town of Royalton, have occurred numerous cases of colitis of an unusual character, not described in any authority with which I am conversant, and, as I think, of sufficient interest to engage the attention of the readers of THE RECORD.

The invasion was sudden, the person attacked was seized with a chill of great severity and long protracted, accompanied with such prostration as one sees only as the result of internal hemorrhage. The chill gave place to a febrile stage, and, as the pulse became accelerated and the temperature increased, the most in-

tense pain was experienced in the right iliac fossa; the patients described it as lancinating—as if thrust through with a sharp knife—and this pain was attended with nausea, but no vomiting. The febrile stage was short in comparison with the chill, and ended in a profuse discharge of *fluid blood from the bowels*, an ordinary bed-vessel being half filled at the first evacuation.

From this time until convalescence was fully established, the fever, pain, tenderness, and diarrhœa were constant. After the first profuse evacuation of blood the small discharges from the bowels were of a typhus, beef-brine character, and very offensive. It was not uncommon to see perfectly natural fæcal matter voided immediately before or after the typhus stools.

The tongue did not become dry or coated until after twenty-four hours, and then not more so than the administration of large doses of opium invariably produces. No sordes collected upon the teeth; many retained their appetite for food; the abdomen was never tympanitic, or the urinary secretion disturbed; no tenesmus, no borborygmi, nor mucous discharges; showing that the seat of disorder was that portion of the colon immediately below the ileo-cæcal valve. Large doses of opium were tolerated, indeed indispensable in controlling the pain, and with the relief of this the nausea disappeared.

Astringents seemed to aggravate the symptoms, increasing the fever and pain, and producing disagreeable eructations.

Turpentine, exhibited externally or internally, failed to mitigate the severity of any of the symptoms which it so universally relieves in enteritis and enteric fever. Calomel in minute doses had no control over the nausea.

The largest number of cases treated by an intelligent observer (thirty or more) occurred in the practice of Dr. D. H. Murphy, who relied on the following formula almost entirely:

℞. Pulv. opii ..... ʒiss.
Quiniæ sulph.,
Piperine,
Pulv. zingeberis ..... ää ʒi.
M. Ft. chat. No. xx.

He gave adult patients a powder every four hours, and continued as long as medication was necessary, increasing the interval between doses, but not lessening the quantity.

In the cases in my own practice I discovered no benefit from quinine, but a marked promptness with which the opium controlled the pain when combined with the *pungent aromatics*. I used capsicum with the opium and alcoholic stimulants, and diet of buttermilk when procurable.

The duration of the disease was rarely less than eight, and often eighteen, days; relapses *always* occurring.

After the opium treatment had been continued forty or forty-eight hours, and the patient had taken ten or twelve grains of the drug, the improvement was so sudden, the cessation of pain and morbid discharges so complete, the return of strength and spirits so decided, and the appearance of the patient so natural, that the medical attendant was often dismissed; but always recalled; for, at that period of the disease, the withholding of a single grain of opium for four hours was invariably followed by a reappearance of all the symptoms, and often with *increased severity*. When genuine convalescence was established, every case was marked by a most obstinate constipation. This, at first, I was disposed to attribute to the long and liberal use of opium; but soon became satisfied that it was consequent upon either a thickening of the mucous membrane at that part of the bowel which was the seat of inflammation, or a loss of the muscular and nervous power at the same point, and most likely both, for the energetic administration of enemata, digital examinations per anum, and the introduction of the rectal bougie, demonstrated the absence of scybalæ.

Time and rhubarb, with strychnia, prudence in diet, and plentiful out-of-door exercise overcame this vexatious sequela.

This disease of the colon was not confined to any class or age, but generally passed through the family and seemed to spread from house to house in a neighborhood by the members of one family watching with the sick of another, and who were attacked in a week or ten days after the first exposure.

The fetid discharges seemed to be the medium of communication, and the free use of carbolic acid a great protection. A Mr. G., who visited a family in Royalton, where the lady of the house, Mrs. W., was suffering most severely from this disorder, and so completely prostrated as to be totally unable to help herself, and being of about 200 pounds weight, it was usual for some male member of the family to assist in nursing her, he remained a portion of one night in her room, and the next day returned to his own home in Canada, nearly or quite a hundred miles distant, and in ten days' time was seized with this form of fever, and his entire family after him. Fortunately, in the practice of regular medical men, this disease was not fatal, so that the opportunity of an autopsy has not occurred. One or two very aged persons, apparently from the same causes, have died of typhoid dysentery, and very suddenly. In these cases the inflammation extended from the *rectum* to the *ileo-cæcal valve*. In the hands of quacks a few cases died from the long-continued exhaustive discharges, and the cases were called typhoid fever; but I do not learn that the abdomen in any case has been markedly tympanitic, that there has been delirium, headache, jactitation, rose-colored eruption, sudamina, deafness, cough, or bronchitic râles in any case, and the tolerance of anodynes was quite the reverse of that usual in *any* but *acute* inflammations of the bowels.

MULTIPLE STRICTURES OF THE URETHRA TREATED BY ELECTROLYSIS.

By T. F. FRANK, M.D.,

TITUSVILLE, PA.

Mr. H. L. McC., of Oil City, Pa., while participating in the raising of a liberty pole at Titusville, Pa., in 1869, was contused at the perinæum by the falling and subsequent rebounding of the pole. Immediately after the accident he experienced some difficulty in micturition, which shortly after resulted in complete retention. Drs. Moody and Barr, of this city, relieved him at different times by catheterism until partially recovered, and he returned to his home.

Upon leaving this city the patient was advised by his physicians to follow the use of bougies, at intervals, till restoration of the urethra should be accomplished. Unfortunately, however, he neglected to act upon this advice, and remained a sufferer.

When he presented himself at my office, Nov. 13, 1872, the following conditions were ascertained, viz.: meatus urinarius too small for the introduction of a No. 8 bougie à boule; micturition excessively painful, and performed only by drops; urine loaded with glairy

pus, and blood-corpuscles in abundance discernible under the microscope. According to the patient's statement, he had not emptied his bladder during the past two years at any one attempt.

I placed him in the lithotomy position, and enlarged the meatus to such an extent with the electro-caustic knife, that a No. 12 bougie à boule could be passed through it and into the fossa navicularis. Continuing to push the instrument gently onward, I met a stricture resisting progress, about two and one-half inches from the meatus.

A No. 1 gum-catheter was the largest I could enter the opening with, and use for deeper exploration. Two inches from the first obstruction I encountered a second, and this so narrow that even the smallest filiform whalebone bougie could not be passed through it.

The patient was not under the influence of ether, and became restless and desired further proceedings to be delayed. I should here mention that I learned from Mr. McC. that, a few weeks previous to his visit to my office, several attempts had been made by two eminent surgeons in Philadelphia to enter the second stricture with the smallest bougies, but without success.

On Nov. 15th he came prepared to undergo any operation I might suggest for his relief; and after relating to him several cases of strictures successfully treated by me with electrolysis, he at once consented to the operation.

Having placed him in the same position as during the examination, I introduced an electrode (equal in size to a No. 10 bougie) into the urethra and as far as the first stricture, and connected it with the negative pole of a twenty-cell zinc and carbon battery; the positive, with a large sponge moistened with warm salt-water, being fixed to one of the thighs. While the assistant in charge of the battery gradually increased its intensity, I held the electrode firmly against the stricture.

When nine cells had been brought into the circuit, and at that strength applied for quite fifteen minutes, the pain became unbearable, and I discontinued the operation.

No unpleasant symptoms being manifested, on Nov. 17th I operated again, and in the same manner as heretofore described; but in five minutes, and while only eight cells were in action, the electrode passed through the stricture. After the removal of the urethral electrode I introduced a No. 12 gum-catheter as far as the second obstruction without any difficulty, and then ordered a repetition of the operation daily, during one week.

Nov. 26. Patient in a cheerful state of mind; had no difficulty in introducing catheter, and expressed himself ready for another operation.

The same electrode as previously described was connected, as during my former operations, and placed against the second stricture. When ten cells had been applied for a few minutes, the operation became very painful and was discontinued.

That night, after the patient's return to Oil City, he had severe chills, and a return of them daily, during one week. Dr. Egbert, of that city, attended him, and, by efficient treatment, so far restored him that I was able to go on with electrolysis on Dec. 6th.

At this time I had the battery-current so gradually increased that an hour was consumed before fifteen cells had been brought into the circuit. During this operation the patient experienced no inconvenience whatever; consequently I repeated the same treatment every other day till Jan. 21, 1873.

On that day the electrode passed through the stricture, and with little effort was pushed into the bladder, after the current had been broken. Immediately after the removal of the instrument the patient passed a full-sized stream of urine, which he had not been able to do for more than two years.

No further electrolytic treatment being required for the present, I advised the use of No. 10 and 12 gum-bougies at one week's interval for an indefinite period, to insure permanent restoration of the urinary canal, as far as that could be accomplished under such circumstances.

From that time I saw nothing of Mr. McC. till October last, when he called upon me on his way home from New York. He had followed self-catheterism regularly as directed, to the day of his visit; but thought it unnecessary now to continue it longer, as he experienced no difficulty whatever during micturition. He had gained twenty-five pounds in flesh since the last treatment, and all former traces of cystitis had disappeared. I therefore dismissed him cured.

In connection with the former statements, I omitted to mention that the second stricture was ascertained to measure one-quarter of an inch in length, while the first I estimated to be of the linear kind.

While the result of my treatment in the above case is exceedingly gratifying to myself, I hope its publication may prove suggestive to surgeons who have tried electrolysis for the reduction of strictures with less success, to persistency in their applications, when such may be justifiable.

DR. LEAMING'S VIEWS ON RESIDUAL AIR AND SUBCREPITANT RALE CRITICALLY CONSIDERED.

By WILLIAM C. GLASGOW, M.D.,

ST. LOUIS, MO.

Dr. J. R. Leaming, of St. Luke's Hospital, New York, in a paper read before the New York State Medical Society, February 5th, 1873, reprinted in the March number of Dr. Brown-Séquard's *Archives of Scientific and Practical Medicine*, presents some new and novel views on "residual air" and the "production of the subcrepitant râle," which, if true, would certainly tend to disorganize and sap the very foundations on which the principles of physical diagnosis are established.

Any new theory, seeking general recognition, and which conflicts with the generally accepted opinions of auscultators, should be founded on sound facts supported by logical conclusions. To establish exactly the amount of residual air in the lungs is, it appears to me, a physical impossibility, and we can only therefore theorize as to the quantity. The favor or disfavor with which a certain theory will be received depends, of course, upon the fact whether we can or can not, in accordance with it, explain satisfactorily the sounds which we know arise within the pulmonary structure; and when we find that the acceptance of the theory will render the production of these sounds physically impossible, we must hesitate, and, however great the authority of its author, reject it. We may be wrong in our views as to the production of these signs. If so, it lies with the "theorist" to explain them.

As Dr. Leaming, by the publication of his theory, has challenged criticism, I propose, in the following brief paper, to prove not only that the premises are incorrect, but also that the conclusions are illogical and unsound; and this I do with great respect for the distinguished author of the paper whose views I controvert.

He says: "All the true respiratory system—that is, all of that part of the lungs which is beyond the third and fourth divisions of the bronchi—is persistently filled with residual air;" and, as a consequence of the acceptance of this proposition, we shall be compelled, of course, to abandon all the established theories of the production of certain of the respiratory phenomena, now believed to be produced in the smaller bronchi. Dr. Leaming seeks to explain the production of one of them, namely, the subcrepitant râle, by withdrawing it from the pulmonary, and making it an "*inter-pleural*" sound. Let us first, then, consider his statement in regard to "residual air." The idea of residual air precludes, of course, all idea of air *in motion*,—at least of all motion necessary to the production of sound,—and hence the extending of the residual air into the bronchi of the third and fourth calibre destroys, at once, the factors necessary for the production of all respiratory phenomena arising within the smaller bronchi. Now let us examine some of these phenomena, and the conditions producing them. *First, the normal vesicular murmur.* The inspiratory sound of normal vesicular murmur is produced by the passage of air through the terminal bronchi into the air-vesicles; whether explained by the theory of *oscillation* (Niemeyer), or by that of *friction* (Laennec, Scoda, Stokes), matters little. Were the bronchioles filled with residual air, there could be, of course, no motion, at least not sufficient to produce a sound; as Dr. Leaming himself allows, when he says, "there is no motion within the residual air of any force or velocity in any direction—no movement at all, except the molecular, which is silent; *there is no need of any other!*" If there is no "need" of any, will Dr. Leaming please explain the production of normal vesicular inspiration? Can we have a "silent" murmur? He may possibly have some views upon this subject with which I am not familiar. Perhaps he is a disciple of the "*système de retentissement*" of Chomel, claiming that the vesicular murmur is only a conducted weakened tracheal sound, thus overlooking the experiments of Chonveau, which conclusively prove the existence of vesicular murmur, the trachea having been divided between the first and second cartilages.

The same "need" of air *in positive motion* is required in explaining the crepitant râle of pneumonia, the prolonged expiration of emphysema, and the sibilant and subcrepitant râles of bronchitis; and unless these can all be logically explained in accordance with his theory, it must fall to the ground.

Appreciating, in part, the difficulties appertaining to such an explanation, he takes up the subcrepitant râle, and disposes of it in a summary, and, to him, doubtless, conclusive manner. He says: "The true mechanism of subcrepitant râle is always *inter-pleural*, and depends upon the presence of exuded lymph. True mucous râles, even when present, are not heard in the presence of plastic râles, for the exudation cuts off sound from the lung as effectually as closing a door!" Has Dr. Leaming never, in his large clinical experience, heard vesicular or broncho-vesicular sounds in cases of pleurisy, in which, judging from marked and acknowledged friction sounds, the pleura was covered with fibrinous exudation? If he has not, his experience is unique, and certainly not that of the majority of clinical observers.

He again says: "I have never failed to find plastic exudation after death as cause of râles heard in life."

That adhesions of the pleura are one of the most common of *post-mortem* appearances, no one can deny; but does Dr. Leaming mean to affirm that, in every case of resolving pneumonia in which the "*râle redux*" is heard, or in every case of capillary bronchitis, even in infant life, in which the subcrepitant râle is present, there is plastic exudation on the pleura? A strange assertion, it would seem, but his words are to this effect; an assertion, however, with which the clinical and *post-mortem* experience of others is surely not in accord. In referring the subcrepitant râle to the "*pleura*," I think it is Dr. Leaming, and not the general medical world, who "misinterprets" the sound. That there is sometimes a great similarity between the true subcrepitant râle and an inter-pleural sound, I would not deny; and it requires, at times, the nicest precision of a practised ear to discriminate, by the sound itself, whether it is pleural or pulmonary. Still, this is no reason why the two sounds should be confounded.

Sounds may be produced on the pleura covered with fibrinous exudation, whenever there is motion of the pulmonary on the costal pleura; and the character of the sound will depend upon the condition of the membrane, whether dry or moist, and upon the character of the motion, whether sliding or perpendicular. If the movement is free and the membrane is dry, we shall have the ordinary rubbing, or, when limited by adhesions, the dry *crackling*, sounds. If the movement is perpendicular, and the membrane is moist, we shall have the *moist* crackling. By perpendicular movement I mean when the two planes of the pleura are brought in contact in a perpendicular manner; and this can only be the case when they are so bound by adhesions, that the normal sliding motion is impossible.

The lung expanding on inspiration, the free surfaces (between the adhesions), covered with an adhesive fibrinous exudation, are brought in contact, and, separating during *expiration*, numerous moist bubbling sounds are produced,—sounds somewhat *resembling* the crepitant râle, only *exaggerated* and *intensified*, being produced under similar conditions. I believe this same moist crackling râle to be the sound mentioned by Walshe as "a medium-sized rhonchus, occurring in puffs, having a liquid bubbling character," but whose production he does not clearly explain; and it may be that these moist and dry crackling sounds, thus alluded to by Walshe, have been "misinterpreted" by Dr. Leaming as the "subcrepitant râle." They occur under the same conditions in which he claims to have found the subcrepitant, and, taking the four cases presented by him, we find all the necessary factors for their production.

Although Dr. Leaming's great skill as a diagnostician, and his reputation as a cautious observer, demand for his views most serious and respectful consideration; still, he must acknowledge that a satisfactory explanation, in accordance with his theory, of all the physical signs of auscultation, will be demanded before his novel views,—which must be regarded at present as purely speculative,—can be accepted by the medical world.

Reports of Hospitals.

BELLEVUE HOSPITAL.

Notes of Practice and Peculiarities in Treatment.

STRUMOUS CHILDREN.

This class of cases embraces those children who seem to be favored with eczematous eruptions, conjunctivitis, glandular enlargements, and exhibit in gen-

eral a predisposition to inflammatory affections, especially of mucous membranes; and whatever the manifestation may be, they have a tendency to run a slow course. In such cases, if the child has any form of eruption, such as eczema capitis, it has a tendency to become confluent and pursue a chronic course.

In the treatment of these cases it is of the highest importance that the children should have the influence of sunlight and fresh air. It is said to be impossible for children to remain within a hospital for any considerable length of time without having scrofula developed.

This class of patients also requires a large amount of nitrogenous food, which is best supplied for young children by keeping them chiefly upon a milk diet. These points cannot be too strongly insisted upon.

The following prescription has been found to be of great service in the therapeutical management of these patients, although it is not an elegant chemical combination:

℞. Syr. pyrophosphate of iron,
Syr. lacto-phosphate of lime, ää.
M.

Teaspoonful three times a day.

In the use of this combination, experience has proven itself a good schoolmaster, and the children do well under its influence.

PNEUMONIA.

A case of this common disease was seen which presented some features not very commonly seen. The patient was a fireman; always had been healthy until two weeks previous, when he was seized with chill, followed by fever, pain in the side, and cough. The history of the case warranted the assumption that the man had been suffering from a mild attack of malarial fever. His temperature since his admission has been steadily 98° and 99°. The specially interesting feature in his case was the development of pneumonia in the upper portion of the right lung, with but few physical signs which precede consolidation, and was followed by very few physical signs which follow consolidation. Neither rational nor physical history of pneumonia was well developed, which is another illustration of the insidious approach which this disease sometimes makes. This man was recovering, and was again illustrating how patients may contract pneumonia, and recover without developing any marked symptoms; and possibly, perhaps probably, many cases run their entire course unrecognized by the medical attendant. This man was recovering without the development of any *râles redux*, and his lung had been in a condition to produce bronchial breathing. Pneumonia is specially liable to occur without the manifestation of well-defined symptoms denoting either its accession or its resolution, in connection with acute articular rheumatism and delirium tremens. It does occur thus, in connection with other conditions. The inference from the facts is apparent, namely, no physician can be too careful and thorough in the examination of his patients.

ABDOMINAL TUMOR.

This tumor was situated in the abdomen of a man 48 years of age. Family history imperfect. Never vomited blood. Has pain, heaviness, and soreness over the epigastrium. Vomits occasionally. Has more or less of dyspnœa, and expectorates considerable white frothy mucus in the morning upon coughing. Appetite is now failing. Examination of urine negative. When the patient sits up all day there will be some œdema of the feet. By some, the œdema of the lower extremities which appear, in connection with an anæmic condition of the system, and such as is manifested in the latter stages of prolonged diseases, is regarded as being due to a hydræmic condition of the blood simply; while others regard the œdema as being due to a mechanical cause, that cause being a thrombosis of the veins.

This tumor, like all of its sort, had certain peculiarities which made the question of diagnosis an interesting one. It was situated in the epigastrium, in the position of the great omentum, was non-pulsating, was not adherent to the walls of the abdomen, moved upwards upon inspiration, had an uneven surface, was quite visible, and had diminished somewhat in size since the admission of the patient into the hospital. It was not believed to be carcinomatous, for the reason that carcinomatous tumors do not actually diminish in size. An apparent diminution in size may occur when adhesions are formed between the tumor and such other parts, that when contractions of the adhesions occur the tumor may be drawn away from a distinct recognition by touch. Such a diminution in size may and does occasionally occur. In very rare cases also this class of tumors take on a retrograde action, and diminish in size, but the rarity of such occurrences hardly permits them to be taken into account.

It has existed for five or six months and has not progressed, which is uncommon for a malignant tumor. It was thought that possibly it might be a fecal tumor. The epigastrium is an unusual situation for a fecal tumor, the ordinary situation being in the ascending colon. Fecal tumors are not usually visible, and are ordinarily of greater size than the tumor in the present case. The tumor was not connected with the liver or spleen. It was believed to be due to an inflammatory action which had produced a quantity of plastic material, which had developed adhesion between the various organs and tissues in that region. In the way of treatment the general condition of the patient was looked after, and whatever could be done to improve the general nutrition was being employed.

CHRONIC BRIGHT'S DISEASE.

The features specially noticeable in connection with the case of Mrs. C., æt. 22, married, were as follows: Her family history was good. When a child she had acute articular rheumatism. She now has a valvular lesion at the mitral orifice, which it was believed had existed since the attack of rheumatism. Although the patient gave no history of having suffered in years past from cardiac disease, the conclusion that this valvular lesion had its origin with the attack of rheumatism in childhood was founded upon the general principle, that children with rheumatism almost certainly have some affection of the heart, and that affection may be carried for many years without much pressure. The cardiac lesion may not produce any special symptoms until renal affection begins to manifest itself, when at once the cardiac symptoms may become well marked, and from that time may continue well marked, although the dropsical symptoms may all be removed. Another feature of interest in the case was the occurrence of a spontaneous diuresis. This is a feature which is seen once in about eight or ten cases, and this spontaneous diuresis may mask the real disease and lead to error in diagnosis, unless the symptom is carefully measured and farther examination of the case made. Œdematous effusions are not liable to be developed when the quantity of urine passed daily exceeds ℥l. In these cases the condition of the kidney ordinarily is one of chronic congestion,

and is secondary to the cardiac disease, and that without any history of cyanosis.

There are three causes for the production of cardiac murmurs: Obstruction in the current of the blood; change in direction of the current of blood; and change in the blood itself.

LARYNGITIS.

Our attention was called to this case as being one in which the affection had succeeded pneumonia. The first manifestations of pneumonia were in the upper lobe of the right lung, and subsequently pneumonia was developed in the left lung. There was some tenderness, as evidenced by giving pain when the larynx was pressed upon its sides or pushed backwards. Aphonia was almost complete, and articulation difficult and tiresome. At the present time the patient complains of pain in the *right* ear, which goes streaking along the neck from the larynx.

Blisters applied below the larynx have given marked relief with regard to pain. They were applied by means of collodion and cantharides combined, and applied with a brush. It was feared that the case would prove to be one of "tubercular laryngitis." The more modern idea is, that the great majority of cases of laryngitis developed under circumstances, as in connection with phthisis, etc., favoring phthisical changes, are not of tuberculous origin; that the presence of tubercles in the larynx in such cases is the exception and not the rule; that the changes which do take place are of an inflammatory nature. A theory has been advanced that, in cases of laryngeal phthisis, the laryngitis is developed as the result of reflex action, reflected from the lungs; and in support of the theory is mentioned the fact, that the disease commences ordinarily in the side of the larynx corresponding to the lung diseased to the greatest extent. There are several inferences given in its support, but the theory is yet in its infancy. Anodyne applications to the external auditory canal are the most serviceable for the relief, but laudanum is not the preferable one, on account of the irritation which the remedy itself may produce.

PERNICIOUS INTERMITTENT.

The patient had had one or two paroxysms before admission to the hospital. This was nearly all that was learned of his history, for while giving his history he became unconscious. To what his unconsciousness was due, was the first inquiry. There were no special indications of its being uræmic coma, as evinced by condition of pupil, condition of respiration, etc. The pupils in uræmic coma are contracted and equal in size, while in meningeal coma they are dilated, and sometimes unequal in size. Uræmia was excluded. There was no paralysis which would exclude hemiplegic causes. From the absence of symptoms, and the fact that the temperature was raised, and the strengthening fact that the patient had had paroxysms of intermittent fever before coming into the hospital, it was concluded that his case was one of pernicious intermittent fever, and a plan of treatment was adopted in accordance with that view. The man received 50 grs. of the sulphate of quinia within eleven hours, in divided doses hourly. He recovered his consciousness in part, the evening of the same day in which he lapsed into his unconscious state; has had no farther paroxysms, and is recovering slowly but apparently surely. His treatment now embraces a nourishing diet and the administration of quinine and iron.

PNEUMO-HYDRO-THORAX.

This disease was developed in a woman, æt. 30, with good family history, and has always been healthy until her present sickness. She has well-developed signs of phthisis, which, as near as can be ascertained, date their commencement three months ago, when she had pain in side, cough, sickness at stomach, expectorated a whitish matter, and within about one month has been expectorating muco-purulent material. She is now suffering from pneumo-hydro-thorax, and the symptoms which marked its development are worthy of notice. She does not present the appearance of a patient who is very sick. There was no sudden pain, no great lividity of countenance, and no great dyspnœa marking the outset of the attack. Upon physical examination, the ordinary signs of the affection were found well-marked, with tympanitic resonance over the precordial region, and displacement of the heart over to the right side by the pressure of the air in the pleural cavity, in the same manner as it would be by a large fluid accumulation in the left pleural cavity. Succussion was this morning present for the first time. Prognosis unfavorable, and treatment sustaining and palliative. Aspiration may be resorted to when the cavity becomes sufficiently filled with fluid to demand it. The initiary symptoms are so mild that the case may continue for some months, possibly longer.

APHASIA, WITH LEFT HEMIPLEGIA.

This case was somewhat unique, from the fact that the aphasia was associated with cerebral lesions upon the right side. The thorough and rapid improvement of the patient made it probable that the lesion was a cerebral hemorrhage. Heart normal size, and no murmurs present. The improvement in the hemiplegia followed the ordinary course, and first manifested itself in the lower extremity, and then in the arm. It has been said that when improvement commences first in the arm, it is an unfavorable symptom, and the patients ordinarily succumb to the disease. It is believed, however, that this statement is not always true, for cases occasionally recover when the improvement first manifests itself in the upper extremities. The case was especially noticeable, as an illustration of aphasia with left hemiplegia, which is rare.

Progress of Medical Science.

ON THE PREVENTION OF UTERINE INFLAMMATION.—Dr. E. J. Tilt, of London, believes that most of the uterine inflammation which physicians have to treat is owing to "a bad getting up," or to a bad miscarriage. Among the symptoms denoting "a bad getting up" he mentions general debility, showing itself in various ways, notwithstanding a fair amount of rest, food, and stimulants; an inability to stand or walk a few steps without feeling ready to drop; a sensation of bearing down, and of uneasiness rather than of pain, in the pelvis; the persistence of an abundant vaginal discharge, particularly if it be bloody or muco-purulent, three or four weeks after parturition, when the lochial discharge ought to have ceased. He says: "When such a disturbance of health arises in the midst of other circumstances, or without known cause, it excites alarm and is carefully investigated; but because it has clearly been caused by parturition, the case is often inadequately attended to by the medical practitioner, change of air and tonics being the only things he recommends. The vaginal discharges are not inquired

into; they are set down as leucorrhœa; and he does not even examine to ascertain whether perchance the symptoms may not be caused by the inability of the womb to get back to its proper size. The patient doubtless improves by tonics or the sea-side, but frequently the benefit is not permanent; and either menstruation becomes too painful and too abundant, or there is a bad miscarriage, or a succession of miscarriages, and after several years of this kind of life the patient is only cured when she meets with a practitioner who will take the trouble to ascertain what is really the matter."

The organic lesions of a bad getting up are: *a*, Defective involution of the womb; *b*, Placental ulceration of the uterus; *c*, Contusion of the uterine tissues; *d*, Rupture of the uterine orifices. To the former of these conditions are not only to be traced catarrh of the mucous membrane, and congestion and inflammation of the uterine tissue, but, also, most of the flexions and displacements which the organ undergoes.

Under the head of "How to Prevent a Natural Function from being a Frequent Source of Metritis," he says: "Speaking generally, all improvements in midwifery, such as the judicious shortening of labor by the skilful use of the forceps, will prevent the development of metritis by diminishing traumatism and by husbanding the strength of the womb for the completion of perfect involution.

"Three sets of women," he says further, "require somewhat different advice: 1, Pregnant women who have previously been under treatment for uterine inflammation; 2, Women who are not making good recoveries from parturition; 3, Women who have miscarried."

1. When pregnancy occurs during or soon after surgical treatment of uterine inflammation, it is best to leave it off, with the exception of a vaginal injection once a day if there be a leucorrhœal discharge. Such women should pass the puerperal month in bed, or on the sofa; they should use a vaginal injection, with a solution of acetate of lead, twice a day, so soon as the lochia cease to be red; and, should this continue to be the case for more than eight or ten days after parturition, they should direct the practitioner's attention to the fact. All such women should submit to a speculum examination at the end of the puerperal month, in order to ascertain whether parturition has led to a relapse of cervicitis, because it most frequently does so.

2. When, without presenting signs of more serious puerperal diseases, a patient is recovering badly from labor, the practitioner should ascertain the progress of uterine involution; and, if it be not progressing sufficiently quickly, he should put on a grave face, discountenance getting up, apply a tolerably firm abdominal bandage, and give ergot. Should the vaginal discharge continue red, it is better not to depend on sulphuric acid and astringents, but make a digital vaginal examination. If at the end of the puerperal time a woman remains weak notwithstanding a fair amount of food, of stimulants, and of tonic medicine; if she cannot stand or walk a little without bearing-down sensations and back-pain; if she have still a red or muco-purulent discharge, it would be folly on the part of the obstetrician to permit connection, and to merely recommend change of air, without learning what is really the matter. It is a great point to get a few months of rest from menstrual orgasm for a womb that has recently suffered from inflammation, or shows a leaning thereto, so he encourages nursing, provided the child do not suffer from lack of maternal milk or from its purity.

With regard to abortion, Dr. Tilt says: "It is the absence of some definite understanding between the profession and the public respecting the rules to be adopted after abortion that renders it a fertile source of metritis. It is well understood by all women placed above the obligation of manual labor that the month following parturition should be one of convalescence, during which the wife should sleep apart from her husband. There is no similar understanding with regard to abortion; women think it right to get about as soon as they can possibly do so, and thus encounter influences which often check the progress of involution." . . . . Even when there be no *post-partum* flooding, or signs of severe pelvic inflammation, and in ordinary cases of miscarriage at from three to five months, Dr. Tilt advises that the same course should be followed as after a confinement at term. The object of the practitioner should be to keep the patient in bed or on the sofa for a few weeks; which he can do by talking seriously of miscarriages being worse than confinements, and of the great danger of one abortion being followed by another. In other respects it is safe to treat the case as one of inflammation.

PARENCHYMATOUS INJECTIONS OF IODINE INTO ACUTELY INFLAMED TISSUES.—Although we are familiar with parenchymatous injections of various medicaments in chronic inflammations of certain organs, and in the treatment of some neoplastic and hyperplastic growths, the suggestion of a similar procedure with the tissue of a part acutely inflamed appears at least paradoxical. From an injection of a tissue in a state of phlegmonous inflammation with a substance like iodine, generally accredited with the power of provoking an inflammation, one would naturally expect only an aggravation of the previous condition. Dr. Arthur Menzel, of Trieste, publishes an article in the *Wiener Med. Wochensc.*, of Nov. 8th, 1873, from which the above would seem by no means the necessary consequences.

During the early part of the last year ('73) an exceedingly severe epidemic of diphtheria prevailed at Trieste. The mortality from this disease was very great, and all methods of treatment appeared alike futile. Considering the enormous swelling of the tonsils that attended the affection, it occurred to Dr. Menzel that the caustic applications made to the parts were so often ineffectual from the fact that the disease-engendering material extended deep into the glandular tissue beyond the reach of the superficial applications. He was thus led to try the effect of injecting a solution of iodine into the substance of the inflamed tonsils, in the hope of arresting the local process of disorganization, and at the same time, through absorption of the remedy, to combat the disease throughout the system. In the first case where it was tried the result was surprisingly brilliant. A child, six years old, had suffered from diphtheria for two days. The tonsils were swollen till they met, each presented a patch of membranous exudation, which, being removed, left a corresponding loss of substance. With a Pravaz' syringe five drops of Lugol's solution of iodine were injected into each tonsil. In one day the tonsils had returned to their normal size; the child appeared quite well, and could swallow without difficulty. Only superficial ulcers remained, which healed in a few days.

The remarkable success obtained in this case led to the same treatment being adopted in six others. The injections were usually repeated at intervals of three to four days. Of the seven thus treated, three recovered, two died, and in two the result was unknown, though from the severity of the attack in the two latter cases, a

fatal termination was inferred. The writer admits a ratio of the cured to the fatal cases of but three to four, but claims that, considering the violence of the epidemic, this is not an unfavorable result. The injections were further tried in a case of malignant pustule, and in one of diphtheritic phlegmon of the cheek where the swelling was extreme and tense. In the former the patient died, in spite of injections and repeated incisions, from thrombosis and metastatic deposits in the lungs. The other case recovered.

In concluding, the writer seeks to show that while of his cases only one showed a positively favorable result, the sum-total was not less favorable to this treatment than in cases where other methods were pursued. Of especial importance is the negative result implied in the circumstance that these injections, in no case, caused an aggravation of the existing condition, or led to gangrene of the tissue. He would thence infer that, very possibly in milder forms of inflammation—not diphtheritic—as, for instance, erysipelas, or in ordinary phlegmon, a more favorable result might be expected from such injections, either of iodine or of carbolic acid, quinine, bromide of potassium, or ergotine, etc. The impunity with which his injections with Lugol's solution were made justify further trial in this direction.

THE TREATMENT OF SYCOSIS AT THE INFIRMARY FOR DISEASES OF THE SKIN IN CANNSTADT.—The beard is first cropped as closely as possible with shears, and the scabs are then removed by poultices of linseed-meal or bread and milk, which usually requires from six to eight hours. The part is then anointed with a salve consisting of one part of green soap to two parts of common tar, three times a day for two days, for the purpose of loosening the hairs, after which the latter are removed with ciliary forceps. Upon the epilated surface acetic acid is now applied with a brush, which causes severe pain and swelling, together with a secretion of serous fluid from the hair-follicles. In twenty-four hours the surface is covered with a dry crust, which falls off in from three to four days. The sycosis is then healed, and only requires observation of the epilated places for three or four weeks to guard against relapses. During this time a paste of lac sulphur and alcohol, with enough mucilage to prevent drying, is applied, and at the end a slightly astringent wash, consisting of benzoic acid, alcohol, and spirits of camphor, by means of which the redness of the skin is removed. The hairs are soon regenerated, this course of treatment not having prejudiced their growth. The treatment is assisted by baths and gentle laxatives.

Salves and fatty preparations, it is thought, are not suited to the treatment of sycosis. The salves of white precipitate and tar, often recommended, only serve to render the disease more obstinate.—*Blätter f. Heilwissensch.—Memorabilien*, xviii., 9.

MAY PULMONARY PHTHISIS BE DEPENDENT ON PRIMARY AFFECTIONS IN THE LARYNX?—To determine this question, Sommerbrodt, of Breslau, instituted a series of experiments upon rabbits. A hot wire was passed through the upper part of the trachea, and there allowed to remain, setting up a chronic inflammation which terminated fatally in from four to ten weeks. During this period the following appearances were observed: In from eight to ten days cheesy deposits were found in the submucous tissue, varying in size from a pea to a hazelnut. The membrane ulcerated and the cartilage was exposed. The inflammation descended more or less rapidly to the finest bronchial tubes, thence to the peri-bronchial tissue, and to the parenchyma proper of the lungs. The condition in the latter situation was characterized by isolated brownish or yellowish red thickenings of the tissue, between which were emphysematous spots. The extension of the process could be traced from the vicinity of the bronchiæ on to the septa of the alveoli, which were thickened, with infiltration of lymph-cells, together with a desquamation of the alveolar epithelium. It thus corresponded very nearly to the peri-bronchitis purulenta and desquamative pneumonia of Buhl. The writer, embracing Buhl's doctrine regarding the deleterious nature of this process, concludes from his experiments that the chronic inflammatory irritation of the trachea leads to peri-bronchitis purulenta, and in its further course to phthisis pulmonum. That the cheesy deposits in the trachea are not to be regarded as the source of the lung affection, was evident from further experiments, where caseous abscesses were produced in other animals in various parts of the body, but in these cases only lobar, croupous, and caseous pneumonia were found, without the characteristic affection of the bronchial tissue. When the wire was passed through the trachea of dogs, there was developed only inflammation of the laryngeal and tracheal mucous membrane, the bronchi and lungs remaining unaffected.—*Archiv für experiment. Pathol. u. Pharm.*, i., 1873. Ibid., 44.—*Allg. Med. Central.-Z.*, 83.

CARBON AS AN ANTIDOTE TO PHOSPHORUS.—Eulenberg and Vohl have demonstrated by experiments that carbon fixes and absorbs phosphorus. If phosphorated oil be filtered through dried animal carbon, excluded from the air, the oil will pass through the filter, but not a particle of the phosphorus. Experiments with guinea-pigs confirm the efficacy of this method by protecting them from phosphorus-poisoning.

The salts of copper have already been recognized as useful in this variety of poisoning, as they are reduced and precipitated by the phosphorus. The fragments of the latter are thus prevented from acting on the organism.

These authors, therefore, suggest that sulphate of copper be first given as an emetic, and, after vomiting has taken place, that the carbon be given alone. They also propose the use of carbon as a prophylactic measure. Artisans exposed to the vapors of phosphorus should wear a respiratory apparatus filled with recently prepared animal carbon.—(*Ann. di Chim. del Polli*, Sept., 1873, and *Lo Sperimentale*, No. 11, 1873.)

SECOND MENSTRUATION FROM THE MAMMÆ AT FIFTY YEARS OF AGE.—Tueffard reports the somewhat curious case of a lymphatic and anæmic woman who menstruated regularly until she was 50 years old, and had had two children. She suffered from granulations of the neck of the uterus. After the cessation of the catamenia the mammæ became turgid and painful every month, and there escaped from the nipples a fluid which was serous at first, and then became sanguinolent and lasted eight days.—*Union Méd.* and *Lo Sperimentale*, Oct., 1873.

ARSENIC-POISONING FROM A GREEN CARPET.—At the July meeting of the Swedish Medical Society, Dr. Kjellberg reported the case of a young man who presented the premonitory symptoms of arsenic-poisoning. He had suffered in a similar way a year previously, but was entirely cured by travelling. The attention of the physician was directed to the peculiar color of the carpet in the patient's room. The color was grayish green. He became suspicious, and had a piece examined chemically, and it was found to contain a considerable quantity of arsenious acid. A new carpet was substituted and the patient recovered completely without further treatment.—*Hygeia, Stockholm*, Oct. 1873.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, February 2, 1874.

HOSPITAL APPOINTMENTS.

EVERY time that a new appointment is made in one of our great city hospitals, the system regulating such appointments deserves fresh consideration. For in this, as in much else that pertains to the management of the medical world, we are so notoriously behind the times and below the standard existing in other civilized countries, that the nature of the principles on which the system depends cannot be too carefully investigated. It is a pure pocket-borough system, just such as in England controlled political appointments previous to the triumph of political reform. The merits of candidates are not canvassed before any competent tribunal, nor is any opportunity offered for a fair test of such merits by open competition or trial of skill. The appointments go by favor, depend upon purely personal influence, and the influence of men who professedly are unable to decide, by their own judgment, on the relative fitness of rival claimants. Political position, even high political character and integrity, offer no guarantee of ability to estimate the qualifications required for technical medical duties. Yet at present no other guarantee exists, and even this, as every one knows, is often wanting. Hospital appointments are exclusively in the hands of hospital commissioners, whose choice, unguided by medical knowledge or professional sympathies, can depend on nothing but political friendships, obligations, and alliances. The recommendation of an alderman counts for more than that of a medical society, or of the entire medical faculty of a community, and the request of a mayor or a governor is sufficient to turn the scale. Moreover, in order to leave the matter as much as possible to the control of such influences, care is taken to avoid the publicity that might bring others into play. The occurrence of a hospital vacancy, that should be a public event in the medical world, formally announced in order to summon all worthy candidates to a strenuous trial of skill, is, on the contrary, kept as secret as possible. It is suspected, whispered abroad, and secret signals beckon privately favored ones to the best places, so that before the apparent competition begins the affair is already decided.

Now this system is as radically absurd, when the successful candidate is really worthy of the place, as when his abilities are markedly inferior to those of rivals forced to retire from the field.

A great opportunity is thus lost for the development of talent, the demonstration of intellectual force, the encouragement of honorable ambitions, the stimulus to exertion in the higher departments of medical work. Without such stimulus such exertions must flag and fail; ambition knows but one outlet—making a successful practice—and all the energies of all the members of the profession are bent in this direction. To this cause is largely to be attributed the comparative sterility amongst us of original research, the indifference to pure science which seems to offer no rewards either in money or fame. Here and there a solitary enthusiast pursues his theme, regardless of public opinion or popular applause; but he is the exception. The intellectual life of the great cities of England, France, and Germany is unknown among us, for there is no competition, no prizes to compete for, no judges to award the prize. Hence the intellectual mediocrity that, however we may blind our eyes to it, contrasts so painfully with our boasted practical efficiency.

The remedy is only to be found where other countries have found it, in the substitution of competitive trials of skill before a jury of physicians, for the exertion of mere personal influence upon a political committee.

A hospital position should be of immense value as a means not only of relieving suffering, but of adding to personal experience, of pursuing original researches, of carrying on the most important part of medical education. Hence it should only be accorded to the candidate who has given proof of experience, learning, skill in diagnosis, and ability to teach. At the competitive examinations in Europe, for whose preparation years of study are not deemed superfluous, candidates diagnosticate difficult cases, give clinical lectures by the bedside, and afterwards write theses on a subject drawn by lot from a list. According to the extent of information, penetration of judgment, medical sagacity, and ability to write and lecture that may be displayed by each, are their rival claims estimated by the medical jury whose recommendation decides the decision of the political power upon whose choice the appointment only nominally depends.

This system has its defects and may be immoderately abused, but it has at least the merit of confining competition to a certain range of capacities, of excluding marked incapacities, of rewarding honest work, and of

affording a brisk stimulus to work even among many who never are rewarded. It is the only fair and democratic method. With us it already dominates the appointments of sanitary inspectors and of hospital internes; it remains to be extended to the nomination of hospital physicians.

THE MEDICAL AND SURGICAL HISTORY OF THE WAR.

It may not be uninteresting to our readers to be informed concerning the distribution of the first part of the Medical and Surgical History of the War. The following is an extract from the annual report of the Surgeon-General for 1873, and speaks for itself:

Sent to Congressional Committees as specimens..	12
" Senators.....	1,000
" Representatives.....	2,000
" Library of Congress.....	50
Damaged and imperfect copies.....	70
To be issued by Surgeon-General's office.....	1,868
Total number of copies printed.....	5,000

It can be seen from this statement what a small proportion of these volumes, so highly prized by the profession, have fallen to their share. Generally speaking, publications upon medical subjects by legislative bodies are very properly viewed by the profession as a useless expenditure of public money for the sake of creating political capital and extending the area of official patronage, a shining example of which was the voluminous, useless, and abominable report of the Columbian Hospital for Women, at Washington. But with the Medical and Surgical History of the Rebellion the interest manifested throughout the whole profession amounted to an enthusiasm worthy of a national work in the hands of the first medical investigators of the country. No work, in fact, published in America has been more eagerly sought on account of its intrinsic value than this one, and every contributor at least rightly believed that he had a claim to a copy, and this belief was strengthened into a prospective certainty when it became known that the distribution was to be intrusted to the Surgeon-General. In the figures before us we have the best explanation why the supply has been so limited as to leave the vast majority of those entitled to the work without it.

We should like to know what has become of the three thousand copies appropriated by the legislators, what were the measures adopted to secure their faithful distribution to such of their constituents as would value the books, and what proportion drifted into the hands of those who helped to make the work what it is by their valuable experiences upon the battle-field and in the general hospitals.

THE ARMY RANK BILL.

The army rank bill has been presented to Congress, and has been referred to the House Military Committee. As an offset to its favorable consideration, we hear of a proposition to reduce the army to twenty thousand men, and the staff in proportion. This is certainly a very inauspicious beginning, and proves the existence in essence, if not in fact, of an indifference to the claims which any corps may have for extra consideration and reward. We hope, however, that our suspicions are unfounded.

It is well to know, in connection with matters in which the profession has no little concern, that the Appropriation Committee have recommended the reduction of the usual amount of ten thousand dollars for the Army Medical Museum and Library, to three thousand. If this is done, the Museum can just exist, and no more, and the collections for the Library must stop. The gentleman who proposes this reduction certainly takes upon himself a grave responsibility, and he owes it to his conscience to give a satisfactory reason therefor to a profession who are alone able to judge of the necessity for keeping both these institutions in a healthful state of progression.

Reviews and Notices of Books.

THE TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION. Vol. xxiv. Philadelphia, 1873.

It is certainly not an honor to our profession that the above volume should go forth to the world as an exponent of the present *status* of medical knowledge in America. It contains but little that is above mediocrity, and, in opposition to the opinion of the President, we claim that it does *not* represent the views of the majority of the profession, and is unworthy of the talent on our side of the water. Much of the short time devoted to the general meeting was wasted in useless discussion, and the meetings of the sections were characterized by a lack or interest among the members in the presentation of scientific papers, as the result of which followed the organization of so-called "practical experience meetings." It is refreshing to observe the opposition which was made by several members against publishing much of the trashy material which was here brought forward.

The papers which have been published *in extenso* are: *On the Education of the Medical Senses*, from the able pen of Dr. Edward Seguin, in which the author advocates greater *subjective* training of the senses than has hitherto been customary with students during their curriculum; Dr. Thomas M. Drysdale, *On the Granular Cell in Ovarian Fluid*, which is also mentioned and portrayed in Dr. Atlee's recent work. Notwithstanding the endorsement of this high authority, we believe that the author has not, as yet, sufficiently substantiated his claim among microscopists. Dr. C. H. Lothrop, before the section on surgery and anatomy, read a paper on the *Treatment of Bunions*, in which he recommends the gradual persuasion of the toe to its normal position by the use of strips of adhesive plaster placed upon and around the heel, the free extremities of which are attached, by means of a rubber band, to a cot placed upon the toe. The *Report on the Climatology and Epidemics of Pennsylvania* is very incomplete, and the *Statistics of Regular Medical Associations and Hospitals of the United States*, and the *Report on American*

Necrology, occupy one-fourth of the volume, and might either have been left out entirely or materially condensed.

The President delivered a lengthy and able address, but entirely ignored the fact that the Association is, year by year, losing more ground, and offered no suggestions by which the latent forces of our medical talent might again be rallied. The reasons for the misrepresentation of the profession in this Association have been repeatedly set forth in the columns of this journal, and we fear that unless there is a thorough reorganization, and a removal of "the powers behind the throne," it will, within a few years, have been a thing of the past.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, January 22, 1873.

THE PRESIDENT, DR. ELLSWORTH ELIOT, in the Chair.

NEW MEMBERS.

THE following persons, recommended by the Comitia Minora, were granted certificates of membership:—HORATIO BRIDGE, 22 East 41st st., a graduate in medicine at Harvard College, Cambridge, Mass., in 1871; THOMAS T. SABINE, 46 West 23d st., a graduate in medicine at the College of Physicians and Surgeons, Medical Department of Columbia College, in 1864; BENJAMIN L. SCHARLAN, 15 Beach st., a graduate in medicine at the University of Berlin, Germany, in 1864; LUCIAN C. WARREN, 749 Sixth av., a graduate in medicine at the Medical Department of the University of the city of New York, in 1867; COERT DUBOIS, Woman's Hospital, a graduate in medicine at the College of Physicians and Surgeons, Medical Department of Columbia College, in 1872; AUGUSTUS VIELE, 579 Lexington Av., a graduate in medicine at the College of Physicians and Surgeons, at Fairfield, N. Y., in 1837; ALEXANDER C. GRAHAM, 159 East 46th st., a graduate in medicine at the Bellevue Hospital Medical College, in 1869; ANDREW R. ROBINSON, a graduate in medicine at the Bellevue Hospital Medical College, in 1868; WILLIAM F. MITTENDORF, 110 East 27th st., a graduate in medicine at the College of Physicians and Surgeons, Medical Department of Columbia College, in 1873; EDWARD G. LORING, 151 Lexington Av., a graduate in medicine at Harvard College, Cambridge, Mass., in 1864.

DECEASED MEMBERS.

The PRESIDENT announced the death of the following members of the Society:

ALFRED UNDERHILL, M.D., a member since January 24, 1834, who died on Sunday, Dec. 7th, in the sixty-fifth year of his age. Deceased was born and always resided in New York. He was a graduate in Arts of Columbia College, and in Medicine, of the College of Physicians and Surgeons. He began practice in 1830, and had held the offices of President of the Society, Vice-President of the Academy of Medicine, etc.; MERRILL W. WILLIAMS, M.D., member of the Society since Feb. 15th, 1830, who died in the seventy-third year of his age; WILLIAM C. ROBERTS, M.D., member since July 4th, 1832, who died Dec. 9th, in the sixty-fourth year of his age. Dr. Roberts was born in London, England, and emigrated to this country when fourteen years old. He studied and began the practice of medicine under the supervision of Dr. Valentine Mott. Dr. Roberts was a graduate of the College of Physicians and Surgeons. At one time he edited a medical periodical known as *The Analist*, and at the time of his death was surgeon to the Central Park Police, and Vice-President of the New York Academy of Medicine; J. E. STILLWELL, M.D., member since May 26th, 1838, who died Nov. 26th, aged sixty years; JONAS P. LOINES, M.D., member since Feb. 1871, who died Dec. 15; PETER VAN BUREN, M.D., member since Jan. 9, 1871, who died Dec. 5th, aged seventy-one years.

DR. CHEESMAN presented to the Society a memorial of the late Dr. Roberts, which was accepted and placed on file.

THE LATE DR. M. W. WILLIAMS.

DR. VAN KLEEK likewise offered resolutions regarding the death of Dr. M. W. Williams, as follows:

Resolved, That this Society has heard with deep regret of the sudden removal by death of Dr. Merrill W. Williams, for many years a member in good standing, and who by his faithfulness and devotion to his profession, his worth and probity as a man, his zeal and earnestness as a Christian, has adorned a well-ordered life and labors, from which he has gone to a reward and a crown, with the commendation of "Well done, good and faithful servant, enter into thy rest."

THE LATE DR. JONAS P. LOINES.

DR. O'SULLIVAN offered the following preamble and resolutions regarding the decease of Dr. Loines:

Whereas, The Medical Society of the County of New York has learned with deep regret of the death of their esteemed fellow-member, Jonas P. Loines, M.D., and while bowing with due submission to the will of the inscrutable and divine Providence, we deem it a duty to place on record a tribute of respect to the memory of our deceased brother, and our appreciation of the services he has rendered to the medical profession of this city by his arduous and unassuming labors as Vaccine Physician to the Eastern Dispensary for upwards of twenty-two years;

Resolved, That in his eminent abilities, untiring energy, and amiable character, we recognize all the qualities that go to constitute the honorable physician: a mind alert and observant; a keenly discriminating judgment; diligence in study, and a heart sympathizing with all the ills of human life.

Resolved, That we tender to the family our heartfelt sympathy in their bereavement, and that a duly authenticated copy of these resolutions be transmitted to them and recorded in full on the minutes.

THE LATE DR. PETER VAN BUREN.

The SECRETARY read for Dr. B. F. Barker, who was unable to be present, the following resolutions relative to the late Dr. Van Buren:

Resolved, That this Society has heard with deep regret of the death of Dr. Peter Van Buren, one of its most respected members, and formerly Vice-President of the Medical Society of the State of New York.

Resolved, That while the professional ability and attainments of the late Dr. Van Buren commanded the respect and secured the confidence of the public, his sterling integrity and Christian character, his devotion to the duties of his profession, and his regard for its dignity and honor during his long life, will ever remain as an example worthy of imitation.

Resolved, That this Society tender to the family of the deceased its deep sympathy and sincere condolence with their bereavement, and that the Secretary be directed to forward to the family a copy of these resolu-

tions; and also that a copy be furnished to each of the medical journals of this city for publication.

Adopted.

REPORTS OF COMMITTEES.

A report by Dr. Goodwillie, of the Committee on Meteorology, was followed by

THE PAPER OF THE EVENING,

by DR. MARY PUTNAM JACOBI, the subject being "The Pathogeny of Infantile Paralysis."

HONORARY MEMBER.

The PRESIDENT announced that at the last meeting of the Comitia Minora the name of DR. ARTHUR ERNEST SANSOM, of London, was proposed for Honorary Membership, and it was voted to recommend his election at the next meeting of the Society.

MEMORIAL OF THE AMERICAN MEDICAL ASSOCIATION.

The memorial of the American Medical Association relative to the rank of the Medical Corps of the United States Army was presented by the President, who said that the *Academy of Medicine* had already appointed a committee to draft suitable resolutions expressive of their sympathy with the medical officers of the service in this movement.

On motion of Dr. J. C. Peters, a committee, consisting of Drs. H. B. Sands, A. C. Post, and I. E. Taylor was appointed by the President to consider the memorial and report at the next meeting of the Society.

CONTRIBUTION TO THE LIBRARY.

DR. JACOBI announced that he had received from Germany a number of pamphlets which had been donated to this Society. On motion they were presented to the Medical Library and Journal Association.

SUBJECT OF NEXT PAPER.

The PRESIDENT announced that DR. MOREAU MORRIS would present to the Society, at its meeting in January, a report of the Committee on Hygiene, of which he is Chairman, on the subject of Drainage, which would be the paper of the evening.

DR. O'SULLIVAN inquired what action, if any, had been taken with regard to the publication of the proceedings of the State Society, and especially what disposition had been made of papers submitted to the Committee on Publication. He had read a paper in 1867, which was referred to the Committee on Publication, but which had never as yet been published.

The PRESIDENT referred him to the Secretary of the State Society for information.

The meeting then adjourned.

NEW YORK MEDICO-LEGAL SOCIETY.

Stated Meeting, Dec. 26, 1873.

CLARK BELL, Esq., PRESIDENT, in the Chair.

ARMY STAFF RANK.

DR. J. C. PETERS moved the appointment of a committee of seven to take into consideration the subject of a memorial of the American Medical Association with regard to the rank of the medical corps of the U. S. Army, based upon the annual report of the Surgeon-General. The committee consisted of the Hon. C. P. Daly; Prof. L. A. Sayre, M.D.; Geo. H. Yeaman, Esq.; E. W. Stoughton, Esq.; Geo. Tichnor Curtis, Esq.; Dr. J. C. Peters, and Prof. W. A. Hammond, M.D.

MEDICAL JURISPRUDENCE OF THE STOKES CASE.

The Society then listened to the paper of the evening, by EUGÈNE PEUGNET, M.D., entitled The Medical Jurisprudence of the Stokes Case, of which the following is an abstract:

"*Ex errore citius emergit veritas quam ex confusione.*" The medical evidence in the repeated trials of this *cause célèbre* has given rise to so much comment, and there has been such a diversity of opinion in regard to it, that a critical analysis of its medical jurisprudence, as presented both by the prosecution and the defence, may render much that is apparently obscure clear, also further the interests of science, and in the future those of a proper administration of justice. It is evident that the juries in the first and third trials were not directly influenced by the medical testimony; it is even doubtful if they took the slightest notice of it. But, nevertheless, it may have had that indirect influence, so frequently made use of by our most successful criminal lawyers, of diverting the attention of the jury from the merits of the case. In this instance it may only have served as a wedge to cast a doubt in the minds of the jurors; for a wedge once well driven in would split the stoutest oak: *Cuneus cuneum trudit.* If the medical evidence failed to have any weight in the trials of this case, it was entirely due to the want of a proper appreciation of its strength on the part of the prosecution. This can only be explained either by a complete ignorance of the first principles of medical jurisprudence, or else by a most profound contempt for it.

Ever since the regular introduction of medical evidence in criminal trials, *coaching* has assumed a prominent position in them. In Europe—especially in France and Germany—this coaching, or medical prompting, is never neglected, and through it the science of medical jurisprudence has there assumed a proud and enviable distinction. But in this country the neglect of it—or rather the want of a proper appreciation of its merits—has served to bring it as well as medical expertism into contempt. Our criminal annals overflow with such cases. Why, just think of it! We have had in the last few years, not even a decade, the Schoeppe-Steinecke, Wharton-Ketchum, Wharton-Vanness, Heggi-Seigfreid, Stokes-Fisk, and the remarkable *de lunatico-inquirendo* Train case, and sequence. In the first of these the Medico-legal Society of the City of New York, whilst yet in its infancy, achieved an imperishable renown by obtaining a new trial for the accused, and preventing, in the words of the learned justice who presided at the last trial, A LEGAL MURDER.

Any of these cases would have been suitable for his theme, but the Stokes-Fisk case probably affords the best and most varied illustration of it. Before entering into a discussion of the points involved in this instance, the doctor gave a concise medical history of the case, extracted from the transcript of the stenographer's notes; then entered into the discussion of shock in its various phases, the physiological and toxical actions of morphine, and the nature of penetrating gunshot wounds of the abdomen.

This case, either for the prosecution or for the defence, thus presented two points for consideration: 1, as to the cause of death; and 2, as to the bearing the two wounds had on the relative positions of the aggressor and his victim at the time of the homicide. The prosecution proved by its own witnesses that this wound was not necessarily fatal, and that the victim died of opium-poisoning. The wound in the left arm, with the holes in the left side of the cloak and the

one in the back of it, taken in connection with the victim's *ante-mortem* statement and with the prisoner's own evidence as to their relative positions, conclusively demonstrated that Fisk could not have held his hands as sworn to by the prisoner, but that the former's left hand was resting on the south-side rail of the staircase, and that as he turned towards the door on receipt of the first wound in the abdomen, the second ball struck the left arm just above the crease of the elbow. *This was the pivot upon which the case for the prosecution rested through three trials, yet they failed to see it.* To this irrefragable evidence, coming as if it were from the grave, they preferred the more than doubtful testimony of Tommy Hart, which was effectually contradicted by the direction of the wound in the abdomen.

The only conclusions to arrive at were that: 1, the shooting was not done in self-defence, but with meditation; and 2, the wound in the abdomen was not necessarily fatal, and the deceased died of poisoning by morphine. These thus proved an attempt to commit murder in the first degree.

The above are *post-hoc* conclusions on a *res adjudicata*, and therefore of but little practical value as applied to the merits of this case. Moreover, it would indeed be an instance of a *mons parturiens*, were not all the points in the whole case pregnant with importance as regards the urgency of a change—

I. In the manner of conducting ante- and post-mortem inquests by the coroners; and

II. A modification in the method of introducing expert testimony into criminal trials.

For all the cases referred to in the opening afford a striking illustration of similar points.

During the discussion which followed the reading of the paper,

Dr. McCready referred to the formula after which Magendie's solution is made. The old formula is different from the present. It is not officinal. It has been the custom, after the Germans, of weighing liquids. But pharmaceutists, in compounding prescriptions, should follow the customs of the country, and not those of a foreign empire.

He referred to the fact that while poisons were invariable in their actions, the peculiarities of the human system are very variable. There are always a few leading symptoms which determine our judgment. There are an immense variety of minor symptoms. This peculiarity of poisons may go far to solve the Stokes case. A case is related in Taylor where an individual swallowed a wine-glassful of acid, but its effects were not observable until the expiration of seven hours. So in the case of Stokes, the opium might not have showed itself until after a time.

Dr. Sayre agreed entirely with the idea that large doses of narcotic poison may be taken without the usual symptoms being manifested. The dose may be so large as to paralyze the stomach, so that absorption may cease for the time, while after a while its effects will be produced immediately.

In regard to Fisk's case, Dr. Sayre gave a history of him as he saw him: "I have had no theory in regard to the matter, except the practical fact that I saw the patient. It was about 9.30 P.M. He was then lying on his back; the arm bandaged. He was very pale. There appeared to be a paralysis of the entire capillary circulation. The pulse was nearly normal. He was perfectly composed, except that he complained of the pain. He described it as a "green-apple belly-ache." He was rather in a jocular mood. I thought like telling him that he had such a pain that I thought he would not digest freely. I came very near making such a reply. I examined him with a great deal of care, and found that the wound had passed in the right side below the nipple. You could see the track of the wound between the masses of fat. One of the young men of the hotel said he would show me the position of the parties when they were engaged in firing. The position occupied by Fisk would necessarily bring the ball out at the opposite hip. I could not find where the ball had gone through. That was the extent of my treatment, and when I saw him again at 12 o'clock, he was under the influence of opium, as I think. It was myself who drew the attention of the physicians to this. I made them count up and measure the quantity given. It was then that Dr. White and myself went back into the room and saw the man, and I then ascertained that the pupils contracted under the influence of light and were normally dilated; his respiration was 22 or 23; it was not the respiration of opium, and the pupils were not permanently contracted. From these facts, I did not think he was narcotized. When I went into the room first, I thought he had been narcotized. From that time opium was stopped, and from the fact that he got up in the night for water, and answered questions, I infer that he was not narcotized. The pallor of his surface and the lack of capillary circulation made me at the time think that there was some injury of the great sympathetic nerve.

Dr. Charles A. Leale stated that at the trial of Stokes he said that he did not consider the wound that Fisk received a necessarily fatal one, as others had testified, and based that conclusion from his own personal experience both in army and civil practice. He then cited the histories of three illustrative cases, where his patients are now living, over seven years after having been wounded. The first was that of a lieutenant, whose abdomen was perforated by a minié-ball, and in consequence had an artificial anus at entrance and exit of ball. In this instance it was twenty-seven days before the first passage of fæces by the anus followed. Extensive splanchnitis of the omentum and coverings followed, sloughs being removed daily for some time. To prove that at least two perforations existed, Dr. Leale injected water through the anterior opening, and as it did not pass through to the posterior opening, and as the discharges from one were much more yellow and liquid than those from the posterior wound, he concluded that the anterior wound communicated with a wounded knuckle of the small intestine, and that the posterior wound opened into the colon. Dr. Leale subsequently closed both by operations, and when he heard from his patient, five years afterwards, was informed that as long as he did not become costive he was in good condition; otherwise pain occurred while fæces passed the constrictions of the intestines.

Dr. Leale's second case was that of a major, who was shot through the upper part of the ilium and across the lower abdominal region, the ball passing out from corresponding point of other ilium. He was wounded while leaning forward on horseback, encouraging his men on to action. In this instance paralysis of all the body below the waist followed, and the fæces and urine were passed involuntarily. Dr. Leale removed several pieces of fractured bones, which were sources of irritation. Five years afterwards he was still under his care, and now, eight years after being wounded, can walk without a cane, and is an active brewer in the northern part of this State.

Dr. Leale's third case of recovery, he stated, was as near like that of Fisk's wound as would probably occur. In this instance, John Grindall, while going upstairs, was shot by a man three feet in front of him, by a ball from a Smith & Wesson pistol. The ball en-

tered near the right and upper border of the umbilical region, passing inwards and downwards, not making its exit. The patient was made to assume the same relative position as when shot, when the probe pointed to a part of the back, where a hard substance was supposed to be felt. Dr. Leale made an incision about one inch in depth, and withdrew the ball from its place of lodgment beneath the lumbar aponeurosis. For two weeks the man was kept partially under the influence of opium, and without a movement from the bowels. Seven years afterwards he saw him, and found that he still suffered from strictures and adhesions of the intestines. As these patients are all now alive, and having known of instances where, after a long period of time, bullets which had penetrated the abdomen had been passed by the anus, also instances where pieces of shell, handles of knives, bullets, etc., had remained in the cavities of the body for years, he became convinced, and when asked, "Do you consider the wound that Fisk received a necessarily fatal one?" he stated, "Mr. President, with comparative ease, I can answer, No."

Dr. Sayre. One of the reasons I gave for my opinion in regard to Fisk's necessarily fatal accident, was the character of the wound, and the fact that the ball did not pass through and through. A wound in the abdomen may not necessarily be fatal. But when you say that he was wounded precisely like Fisk, how do you know? The only way to decide this whole question is to place Stokes in the same position that Fisk was when he received the ball, have him wounded in precisely the same way, and let him get well or die without the aid of a doctor. That will prove it without a doubt.

After a few remarks by Dr. Peugnet, the meeting adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, Dec. 10, 1873.

Dr. E. L. Keyes, Vice-President, in the Chair.

Dr. John C. Peters announced the death of Dr. W. C. Roberts, the first Secretary of this Society. After alluding to the valuable services of the deceased, he moved the appointment by the chair of a committee to draw up suitable resolutions. The chair appointed Dr. J. C. Peters and F. V. White as such committee.

WAXY LIVER AND PLASTIC PERITONITIS.

Dr. E. Peugnet presented a specimen of waxy liver and plastic peritonitis, in which all the abdominal organs, with the exception of the kidneys and spleen, were firmly agglutinated together.

A man, 30 years of age, by profession a chief cook, had always enjoyed good health until about the 15th of August, 1873, when he observed that his abdomen was becoming distended, and that towards evening there was an unusual sensation of heat in it. On the 1st of November he came under the doctor's care. At that time he was somewhat emaciated, the skin dry, pulse 98, tongue normal, temperature also; the secretion of urine rather scanty, but presented nothing otherwise abnormal; bowels regular, and some inappetency. The abdomen was very much distended, and superficial veins prominent. On percussion there was marked dulness over the entire abdominal region; the liver did not appear to extend upwards; there was no dulness above the sixth rib. Inquiry into the previous history yielded negative results. He had been a moderate drinker, had had chancroids, but no traces of syphilis; never had intermittent fever. A drastic cathartic was then given to him. On the 3d, his general condition was about the same; there was a marked wave-like motion caused by bilateral percussion, but the universal dulness still persisted. On the 12th of November he rode out in a carriage; was taken the next day with a chill. November 14. Pulse 112, temperature 102⅘, tongue bluish red, with raised papillæ. Slight dulness on percussion of right side, extending to inferior angle of scapula, respiratory murmur obscure in lower lobe, with moist and dry râles in upper half; left side normal. 20th. Condition about same, asthenia more marked, considerable dyspnœa, less flaccidity of the abdomen. November 22. Dyspnœa more marked. Temperature continues at 102⅘; dulness over right lung more extensive; râles still present, with inability to lie on back or left side; respiration puerile on left side. November 30th. Pulse 130, temperature still persistent at 102⅘; dyspnœa intense. Introduced trochar in abdomen, midway between umbilicus and symphysis, and drew off three quarts of a reddish serum; a director had to be introduced into the canula to push back an obstruction to the flow. On microscopical examination of the fluid numerous blood-corpuscles were found, but no ecchinochi or any cell-structure. December 1st. Dyspnœa not as intense, pulse 112, temperature 102½; a distinct tumor was felt in left hypochondrium, extending into epigastrium. On percussion, there was slight resonance over this tumor, but more on left side over descending colon. The dulness on right side in an oblique line from cartilage ninth rib on left side to crest of ilium persistent, which was supposed to be due to a cyst. December 3d. Patient gradually sinking; effusion in right pleura more extensive; none on left side; last time seen alive; he died on the 7th instant.

The autopsy was made seventeen hours after death. Rigor mortis well marked, body slightly emaciated. On opening the thorax a serous effusion was observed in both pleural cavities; the right contained about three pints, the left five pints. There was an old adhesion, with a cicatrix, at apex of left lung; the upper and middle lobes of right lung were slightly carnified. The pericardium contained half an ounce of serum, and the heart rather smaller than usual, but normal. The abdomen was somewhat distended, and the anterior surface of the omentum was firmly adherent to the anterior parietal reflection of the peritoneum, its cavity distended and forming a distinct cyst from the left hypochondrium obliquely downwards towards the right iliac region. The greater cavity of the peritoneum contained three quarts, of reddish serum, similar to that which had been drawn in tapping. The cavity of the omentum contained two quarts. All the viscera were so firmly bound together that it was found necessary to remove them all *en masse* with the diaphragm; with the exception of the spleen the entire mass weighed 18 pounds. On further examination the liver was found to be waxy and enlarged; there were some recent adhesions between the diaphragm and liver. The tumor *delecta* in the epigastric and left hypochondriac regions proved to be a large collection of omental fat, and the resonance was due to its situation over the transverse colon. The kidneys were somewhat enlarged, but normal. The points of interest in this case were: 1. The entire absence of previous history of any cachexia whatsoever. 2. No account of any previous peritonitis; and, 3. That these intimate adhesions had never led to any intestinal obstruction. It is possible that auscultatory percussion might have revealed the exact size of the liver, and it is to be regretted that it was not made use of.

Dr. Knapp exhibited a patient with epithelioma of

lower lid, upon whom he intended to perform a plastic operation.

INTUSSUSCEPTION.

DR. LEWIS SMITH exhibited a portion of the intestine of an infant who died at the Nursery and Child's Hospital rather suddenly after a trifling illness of but thirty hours. No diagnosis was made, the only noticeable symptom being an attack of vomiting. At the autopsy all the organs of the body were found healthy, with the exception of a portion of the small intestine fourteen inches above ileo-cæcal valve, which was presented, and which was the seat of an intussusception. The incarcerated portion was three inches in length, and presented a deep-red appearance, evidently the result of intense congestion. It was evident that the intussusception existed some hours before death, and proved the case to be an interesting one occurring in so young an infant.

(To be continued.)

ARTICLES IN OUR EXCHANGES.

ANATOMY AND PHYSIOLOGY.

Malposition of the abdominal and thoracic viscera. B. W. ALLEN. *Richmond and Louisville Med. Jour.*, Dec., 1873.

On certain worms found in the alimentary canal of lucioperca. H. C CHAPMAN. *Phil. Med. Times*, Jan. 3, 1874.

Case of impregnation without intromission. T. HAY. *Ibid.*

Malformation of extremities caused by arrest of development. W. H. SHARP. *New York Med. Jour.*, Jan., 1874.

A property of capillary blood. F. FALK. *Virchow's Archiv*, 59, 1, 1873.

Motion of the pylorus and duodenum. BRAUNE. *Archiv d. Heilkde.*, 1, 1873.

The number and characters of certain layers of the cornea. *Allg. Wien. Med. Ztg.*, 40, 41, 1873.

The splanchnic nerves in their relation to peristaltic action. VON BASCH. *Ibid.*, 40, 1873.

Transfusion of water in the capillaries under blood-pressure. KÖRNER. *Ibid.*, 49, 50, 51 (continued).

Cells and cell life. RAUSCHENBERG. *Atlanta Med. and Surg. Jour.*, xi., 8.

Experimental investigations on the functions of the brain. NOTHNAGEL. *Virchow's Archiv*, lviii., 3 and 4.

On the persistence of the frontal suture. SIMON. *Ibid.*

The heliopiktor, an apparatus for making anatomical, microscopical, and surgical pictures.

Interference with the intestinal movements by the splanchnic nerve. VON BASCH. *Allg. W. Med. Ztg.* xviii., 45, 46.

Experimental investigations upon the origin of pus-corpuscles in traumatic keratitis. BOETTCHER. *Virchow's Archiv*, lviii., 3 and 4.

Experiments on the functions of the brain. NOTHNAGEL. *Virchow's Archiv*, lviii., 3 and 4.

Osmotic phenomena and the function of absorption in the animal kingdom. PACINI. *Lo Sperimentale*, Oct., Nov., Dec., 1873.

The formation of urea in the kidneys. PRIMAVERA. *Ibid.*, Dec., 1873.

Double generative organs in a female. C. DE PIÑEGRO. *Anfit. Anat. Espan.*, 23, 1873.

Glycogenic action of the liver. LUCHSINGER. *Pflüger's Archiv für Phys.*, 7 and 8, 1873.

Reflex irritation of the vasor nerves. E. CYON. *Pflüger's Archiv*, 7 and 8, 1873.

Influence of the change of temperature on the ends of cardiac nerves. E. CYON. *Ibid.*

Influence of the posterior roots on the excitability of the anterior. E. CYON. *Ibid.*

The innervation of the uterus. E. CYON. *Ibid.*

Experiments on butyric acid fermentation. PASCHUTIN. *Ibid.*

Studies of albuminous substances. NASSE. *Ibid.*

SURGERY.

Resection of the humerus. W. W. CLARK. *Northwestern Med. and Surg. Jour.*, Jan., 1874.

Report on Tennessee surgery. Vesico-vaginal fistula (continued). W. T. BRIGGS. *Nash. Jour. of Med. and Surg.*, Dec., 1873.

Fracture of the skull, with depression of bone—trephining—recovery. T. A. GOLD. *Ibid.*

Foreign bodies in the air-passages. J. D. BURCH. *Richmond and Louisville Med. Jour.*, Dec., 1873.

Phlegmasia dolens. C. E. HAGNER. *Ibid.*

Wound of the brain. C. H. MASTIN. *Ibid.*, Dec., 1873.

Spina bifida cured by aspiration and injection of iodine. C. M. ELLIS. *Phil. Med. Times*, Jan. 3, 1874.

Esmarch's method for bloodless operations. W. W. KEEN. *Ibid.*, Dec. 27, 1873.

Excision of the hip-joint. J. L. WYLIE. *Clinic*, Dec. 27, 1873.

Foreign bodies in the air-passages. W. W. DAWSON. *Ibid.*, Jan. 3, 1874.

Fracture of the clavicle. R. D. MCDONALD. *Ibid.*, Jan. 10, 1874.

Excision of left superior maxillary and malar bones and one-half of the nose. M. METIVIER. *Can. Med. and Surg. Jour.*, Dec., 1873.

Hemorrhage from the internal carotid artery successfully treated by ligature. H. B. SANDS. *New York Med. Jour.*, Jan., 1874.

Ligature of external and internal carotids for hemorrhages. S. SMITH. *Ibid.*

Cancer of rectum—lumbar colotomy. J. H. POOLEY. *New York Med. Jour.*, Jan. 1874.

Painful enlargement of testicle—removal. *Ibid.*

Compound fracture of radius and ulna, and dislocation of elbow and wrist. P. A. BISSELL. *Ibid.*

Sprained ankle treated by manipulation, with comments. W. R. FISHER. *Ibid.*

Stone in the bladder. W. H. HINGSTON. *Canada Med. Record*, Dec., 1873.

Gunshot wound of the brain. P. W. VAN REGMA. *Buffalo Med. and Surg. Jour.*, Dec., 1873.

Luxated elbow. HUDSON. *Pacific Med. and Surg. Jour.*, Dec., 1873.

Myositis ossificans progressiva. FLORSCHÜTZ. *Allg. Med. Central Ztg.*, 98, 1873.

Cases illustrating the uses of the pneumatic aspirator in surgery. HOMANS. *Boston Med. & Surg. Jour.*, 26, 1873.

Case of ostitis deformans. SCHMIDT. *Archiv d. Heilkde.*, 1, 1874.

Improvement in the method of removing tumors by means of the elastic ligature. DITTEL. *Allg. Wien. Med. Ztg.*, 42, 1873.

Case of sterno-costal luxations. WOLFSTEIN. *Ibid.*, 44, 1873.

Right upper extremity, including shoulder-blade, torn off—recovery. KATHOLITZSKY. *Ibid.*, 45, 1873.

Rickets and osteomalacia artificially produced. HEITZMANN. *Ibid.*

Continuation of the report on stone-crushing. POANCHICH. *Ibid.*, 47, 50, 1873.

Extirpation of a kidney—recovery. BRANDT. *Wien. Med. Wochenschr.*, 48, 1873.

Cases of tumors of the testicle. HAYCK. *Wien. Med. Wochenschr.*, 52, 1873.

Case of lateral lithotomy with Smith's instrument. DANEK. *Wien. Med. Wochenschr.*, 50, 1873.

Laryngo-fissure (exposure of the larynx from without) *versus* laryngoscopic surgery. TELENFFY. *Ibid.*, and 51.

Roussel's transfusor (drawings). *Ibid.*

Esmarch's bloodless operation. VON LANGENBECK. *Berlin. Klin. Wochenschr.*, 52, 1873.

Reunion of portions of the body after complete separation. ROSENBERGER. *Ibid.*

Treatment in cases where portions of the body have been completely separated. GLOGNER. *Ibid.*

Interesting injury of the superficial palmar arch, with considerations on the mediate and immediate reunion of the wound. MARCHIONNESCHI. *Lo Sperimentale*, Oct., 1873.

Tracheotomy and the use of the hooks instead of the canula. MINUTELLI. *Ibid.*, Dec., 1873.

Symmetrical gangrene of extremities. E. BULL. *Norsk Mag. f. Laeg.*, 12, 1873.

Clinical and anatomical considerations concerning adenitis. MANGIAGALLI. *Gaz. Med. Ital. Lomb.*, 49, 1873.

Wounds with a hay-fork. PETERSEN. *Ugeskrift f. Laeger*, 24 and 5, 1873, and COLD, 27, 1873.

On the origin of tumors in the sacrum with fœtal contents. FRAZER. *Virchow's Archiv*, lviii., 3 and 4.

Ligation of the crural artery. RITTER. *Med. Corr. Bl.* xliii., 1.

Extirpation of one kidney after previous accidental injury, with complete recovery. BRANDT. *W. Med. Wochensc.*, xxiii., 48.

Tumors. STICH. *Berl. Klin. Wochensc.*, 47.

Operative treatment of inflammation of the pleura. LEBERT. *Ibid.*, 46.

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Case of complete placenta prævia. PANI. *Bull. del. Sci. Med.*, Oct., 1873.

Extraordinary position of a malformed fœtus, and observations on certain difficulties attending the birth of monstrous or diseased fœtuses. PORRO. *Gaz. Med. Ital. Lombard.*, 50, 1873.

Retroflexion of the uterus—its relation to conception and pregnancy. STADFELDT. *Ugeskrift f. Laeger*, 22, 1873.

Cases of hemorrhagic dilatation of the os uteri during labor. BOKKENHEUSER. *Ibid.*, 26, 1873.

Cholera infantum. HOADLEY. *Indiana Jour. of Med.*, iv., 8.

Case of placenta prævia with presence of large fibroid tumor in the lower part of the uterus. HABIT. *Allg. W. Med. Ztg.*, 46.

Ovarian tumor successfully treated by tapping, compress, and bandage. D. KELLER. *Richmond and Nashville Med. Jour.*, Dec., 1873.

Chronic diarrhœa in infants and children. T. C. SMITH. *Detroit Rev. of Med.*, Jan., 1874.

Puerperal convulsions relieved by hypodermics of morphia. J. P. DIMMITT. *Kansas City Med. Jour.*, Dec., 1873.

Fallopian pregnancy, with rupture of cyst and death in the third week. T. H. CATHCART. *Phila. Med. Times*, Dec. 27, 1873.

Accidental hemorrhage during pregnancy. H. LEAMAN. *Phil. Med. Times*, Jan. 10, 1874.

Two cases of ovariotomy, both resulting fatally. J. W. BROCK. *Medical Herald*, Jan. 1, 1874.

The forceps in labor. W. R. MARSH. *Penins. Journ. of Med.*, Jan., 1874.

Constitutional relations of second dentition. J. MULREANY. *New York Med. Jour.*, Jan., 1874.

Cystic encephaloid of the ovary in a child eight years old. W. H. SHARP. *Ibid.*

Practical hints in treatment and prevention of uterine disease. W. GOODELL. *Med. and Surg. Reporter*, 2, 1874.

Case in midwifery. KEYT. *The Clinic*, 25, 1873.

Death by hemorrhage from rupture of Fallopian tubes. MILLER. *Pac. Med. and Surg. Journ.*, Dec., 1873.

Placenta prævia, with simultaneous appearance of a uterine fibroid. HABIT. *Allg. Wien. Med. Zeit.*, 46, 1873.

PATHOLOGY AND PRACTICE OF MEDICINE.

Experiments on the origin of pus-corpuscles in traumatic keratitis. BOETTCHER. *Virchow's Archiv*, lviii., 3 and 4.

Experiments in relation to puerperal fever. ORTH. *Ibid.*

On sulphuric acid and its relations to tannin in the animal economy. SALKOWSKI. *Ibid.*

Cases of sacral tumor with fœtal contents. FREYER. *Ibid.*

Embolic aneurism, with remarks on acute cardiac aneurism. PONFICK. *Ibid.*

Yellow fever (continued). CARBÓ Y VALLÉS. *Anfit. Anat. Espan.*, 22, 23, 1873.

Persistence of frontal suture. SIMON. *Ibid.*

Anatomico-pathological observations. SEVERI. *Bull. del Sci. Med.*, Oct., 1873.

Tumors of the mamma: their diagnosis and treatment. CARBÓ. *Anfit. Anat. Espan.*, Nov. 30, 1873.

Chronic pericarditis with pericardial adhesions. STABELL. *Norsk Mag. f. Laeg.*, 12, 1873.

Specific treatment of typhoid fever. PULIDO. *Anfit. Anat. Espan.*, 22, 1873.

Peculiar stethoscopic conditions in the pleurisy and pneumonia of children—with two cases. BUDDE. *Ugeskrift f. Laeger*, 21, 1873.

Antiphlogistic and restorative treatment of inflammations. E. MONTGOMERY. *St. Louis Med. and Surg. Journ.*, Jan., 1874.

Hysteria and spinal irritation. C. H. HUGHES. *Ibid.*

Histological pathology of diphtheria. T. O. SUMMERS. *Nash. Journ. of Med. and Surg.*, Dec., 1873.

Some facts in the history of Asiatic cholera. W. CLENDENIN. *Cinn. Lancet and Obs.*, Jan., 1874.

Traumatic myelitis. H. MANFRED. *Ibid.*

Malarial hæmaturia. T. T. TURPIN. *Rich. and Louisville Med. Journ.*, Dec., 1873.

A marsh plant of the Mississippi bottoms, and its genetic relations to malarial diseases (drawings). JNO. BARTLETT. *Chic. Med. Journ.*, Jan., 1874.

Croup. W. G. GUSTIN. *Peninsular Journ. of Med.*, Jan., 1874.

Pneumonia. P. STEWART. *Ibid.*

Forty cases of diphtheria treated by local application of sulphate of iron. A. W. NELSON. *New York Med. Journ.*, Jan., 1874.

Influence of anæmia on the nutrition of the musculature of the heart. PERL. *Virchow's Archiv*, 59, 1, 1873.

Natural history of specific yellow fever. JOSEPH JONES. *New Orleans Med. and Surg. Jour.*, Jan., 1874.

Miasm—its probable origin and action. B. SMITH. *Ibid.*

Yellow-fever epidemic of Memphis. Y. R. LE MONNIER. *Ibid.*

Notes on yellow fever. F. J. B. ROMER.

Case of splenic abscess. J. KNOWLES. *Buff. Med. and Surg. Journ.*, Dec., 1873.

Embolism of the left middle cerebral artery. R. A. KENNEDY. *Can. Med. Record*, Dec., 1873.

Acute suppurative pleuritis. C. LAFONTAINE. *Ibid.*

Traumatic phthisis. BEVAN. *Physician and Surgeon*, 16, 1873.

Notes on the winter epidemics of cerebro-spinal meningitis. VEBAULT. *Virg. Clin. Record*, Dec., 1873.

Nerve degeneration and regeneration. HERMAN EICHHORST. *Virchow's Archiv*, 59, 1.

On the bacteria question. WOLFF. *Ibid.*

The bacteria question in acute yellow atrophy of the liver. ZANDER. *Ibid.*

Chronic pseudo-membranous peritonitis after repeated punctures of the abdominal wall. BAÜMLER. *Ibid.*

Intestinal mycosis and its relation to malignant pustule. E. WAGNER. *Archiv der Heilkde.*, 1, 1874.

The vascular lesions in tuberculosis. THAON. (Conclusion.) *Allg. Wien. Med. Ztg.*, 39, 1873.

Constipation in pneumonia. SKODA. *Ibid.*

Contagion, miasm, and contagio-miasmatic diseases in their various acceptations. KÜCHENMEISTER. *Ibid.*, 44, 1873.

Treatment of pneumonia. HERMANN. *Ibid.*, 46, 47, 48, 50, 51, 1873.

Therapy of biliary colic. PICHLER. *Ibid.*

Diagnosis of cholera. HERMANN. *Wien. Med. Wochenschr.*, 48, 1873.

Contribution to the literature of tumors. STICH. *Berl. Klin. Woch.*, 47, 48, 49, 1873.

Operative treatment of pleurisy. LEBERT. *Ibid.* 48, 49, 50, 51.

Treatment of dysentery. WENZEL. *Ibid.*, 48, 1873.

Treatment of diabetes mellitus with carbolic acid. EBSTEIN and MÜLLER. *Berl. Klin. Wochenschr.*, 49, 1873.

Nephritis scarlatinosa. HENOCH. *Ibid.*, 50, 1873.

Diarrhœa during the cholera epidemic. MÜHLHÄUSEN. *Ibid.*

Later ideas on the parasites which are the cause of disease. RICHTER. *Schmidt's Jahrbuch.*, 7, 1873.

Inflammation of the central nervous system. BENEDIKT. *Allg. W. Med. Ztg.*, xviii., 46.

The treatment of pneumonia. HERMANN. *Ibid.*

Therapeutics of gall-stone colic. PICHLER. *Ibid.*

Artificial production of rachitis and osteomalacia. HEITZMANN. *Ibid.*, 45.

The transudation process in cholera. GOLDBAUM. *Berl. Klin. Wochensc.*, x., 46.

Embolic aneurisms, with observations on aneurism of the heart. SALKOWSKI. *Virchow's Archiv*, lviii., 3 and 4.

MATERIA MEDICA, THERAPEUTICS, AND TOXICOLOGY.

Importance of inhalations in diseases of the respiratory organs. MASSE. *Lo Sperimentale*, Oct., 1873.

Malarial infection and Cantani's views of the action of quinine. CHIRONE. *Ibid.*, Nov., Dec., 1873.

Electricity employed with success as a *dernier ressort* in the capillary bronchitis of a new-born child. E. HANSEN. *Norsk Mag. f. Laeg.*, 12, 1873.

Nitrate of amyl and epilepsy. HOEGH. *Ibid.*

Massage. DRACHMANN. *Ugeskrift f. Laeg.*, 27, 1873.

Opium in puerperal inflammation. F. STAPLES. *Northwestern Med. and Surg. Journal*, Jan., 1874.

Inhalation of ammonia as an antidote to snake-bite. W. KEITH. *Kansas City Med. Jour.*, Dec., 1873.

Pepsin. R. T. EDES. *Bost. Med. and Surg. Jour.*, 1, 1874.

Theory of vitality and its relations to materia medica. W. R. DUNHAM. *Ibid.*, 2, 1874.

Effects of carbolic acid in a large dose. S. J. RADCLIFFE. *Phil. Med. Times*, Jan. 3, 1874.

Cases of poisoning by vinum colchici. G. W. MAJOR. *Can. Med. and Surg. Jour.*, Dec., 1873.

Syrup of wild cherry. R. ROTHER. *Pharmacist*, Jan., 1874.

Bismuthous citrate. R. ROTHER. *Ibid.*

Commercial pepsin. *Ibid.*

Acetate of lead in post-partum hemorrhage. J. CHANONHOUSE. *Can. Med. Record*, Dec., 1873.

Case of lead-poisoning. W. C. CORSON. *Can. Lancet*, Jan. 1, 1874.

On Chinese dietetics and pharmacology. C. SCHMIDT. *Dorpat Med. Zeitschr.*, iv., 3 and 4, 1873.

The doctrine of poisons. NANCE. *Med. Examiner*, 24, 1873.

Local anæsthesia of the larynx. HARRIS. *Bost. Med. and Surg. Journ.*, 26, 1873.

Bismuth to prevent chafing. L. C. SMITH. *Pac. Med. and Surg. Journ.*, Dec., 1873.

Dietetics. BROOKS. *Clinic*, 25, 1873.

Examination into the physiological action of the preparations of bromine. STEINAUER. *Virchow's Archiv*, 59, 1, 1873.

Remarkable action of the phosphate of lime in a case of renal hemorrhage. ENGELSBERG. *Wien. Med. Wochenschr.*, 52, 1873.

Cases of acute carbolic-acid poisoning. KRÖNBEIN. *Berl. Klin. Woch.*

OPHTHALMOLOGY AND OTOLOGY.

Anomalies of refraction. FERNANDEZ. *Anfit. Anat. Espan.*, Nov. 30, 1873.

Function of the semicircular canals. E. CYON. *Pflüger's Archiv. f. Phys.*, 7 and 8, 1873.

Disturbances of vision from ingestion of certain drugs. D. S. REYNOLDS. *Nash. Journ. of Med. and Surgery*, Dec., 1873.

Foreign bodies in the eye. S. C. AYRES. *Cinn. Lancet and Obs.*, Jan., 1874.

Treatment of syphilitic iritis. A. D. WILLIAMS. *Ibid.*, Jan., 1874.

Inspissated cerumen, with partial absorption of the walls of the bony meatus. H. N. SPENCER. *Kansas City Medical Journ.*, Dec., 1873.

Retinitis albuminurica as distinguished from uræmic amaurosis. C. S. BULL. *Ibid.*

The light streak of the retinal vessels as a diagnostic sign. E. LORING. *New York Med. Jour.*, Jan., 1874.

Communications from otological practice. POORTAN. *Dorpat Med. Zeitschr.*, iv., 3 and 4, 1873.

Perforation of the mastoid process. BEYOLD. *Monatschr. f. Ohrenhlkde.*, vii. ii.

The colonnades of the labyrinth. BREUER. *Allg. Wien. Med. Zeit.*, 48, 1873.

A new operation on the membrana tympani. VOLTOLINI. *Berl. Klin. Wochensch.*, 52, 1873.

Geographical distribution of eye diseases. FALK. *Schmidt's Jahrbuch.*, 9, 173.

DERMATOLOGY AND SYPHILOGRAPHY.

Etiology of pellagra. LOMBROSO. *Gaz. Med. Ital. Lombard.*, 47, 1873.

Vaccination. E. L. GRIFFIN. *Northwestern Med. and Surg. Jour.*, Jan., 1874.

Tinea sycosis. J. J. LAMADRID. *Phil. Med. Times*, Jan. 3, 1874.

Pruritus hiemalis; an undescribed form of pruritus. L. A. DUHRING. *Ibid.*, Jan. 10, 1874.

Case of dactylitis syphilitica. T. CURTIS SMITH. *New York Med. Jour.*, Jan., 1874.

Classification of skin diseases. J. W. SOUTHWORTH. *Buff. Med. and Surg. Jour.*, Dec., 1873.

Treatment of small-pox. A. VON MANSFELDE. *Med. and Surg. Reporter*, 2, 1874.

Papulo-squamous syphiloderm. DUHRING. *Phil. Med. Times*, 112, 1873.

Favus upon the neck. HILLER. *Allg. Med. Central Ztg.*, 97, 1873.

Treatment of gonorrhœa. BÖHM. *Allg. Med. Central Ztg.*, 100, 1873.

The latent stage of hereditary syphilis. EISENSCHITZ. *Wien. Med. Wochenschr.*, 48, 1873.

NERVOUS DISEASES.

Report of the cases of disease of the brain and spinal cord observed in the Medical Division of the Santa Maria Nuova Hospital. MORELLI and STACCHINI. *Lo Sperimentale*, Dec., 1873.

Paralysis of tongue. C. DE PIÑEIRO. *Anfit. Anat. Espan.*, 22, 1873.

Rheumatic tetanus cured by subcutaneous injections of curara. STOPPANI. *Gaz. Med. Ital. Lomb.*, 47, 1873.

Report on thirty cases of chorea. G. S. GERHARD. *Phil. Med. Times*, Jan. 3, 1874.

Idiopathic tetanus successfully treated by hydrate of chloral and bromide of potassium. W. S. MAXWELL. *Ibid.*, Jan. 10, 1874.

Cases of peripheral paralysis. WEBBER. *Bost. Med. and Surg. Jour.*, Dec. 18, 1873.

Paralysis of the vagus in man. GUTTMANN. *Virchow's Archiv*, 59, 1, 1873.

Case of general anæsthesia. SCHÜPPEL. *Archiv der Heilkde.*, 1, 1874.

Contribution to the pathology of the vaso-motor nerves. CUNTZ. *Ibid.*

Case of saturnine epilepsy with mental disturbance. LEIDESDORF. *Allg. Wien. Med. Ztg.*, 44, 1873.

Inflammation of the central nerve-system. BENEDIKT. *Ibid.*, 45, 1873.

Paralysis of upper and lower extremities following typhoid—recovery. REITTER. *Ibid.*, 50, 1873.

HYGIENE.

Cincinnati Hospital. *Sanitarian.* Jan., 1874.

Hospitals of New York. F. E. HYDE. *Ibid.*

Defective house-drainage. L. BRANDEIS. *Ibid.*

Prevention of disease. F. S. LYNCH. *Ibid.*

The sewage question. S. LEVITT. *Ibid.*

Outbreak of Asiatic cholera. J. C. PETERS. *Ibid.*

State medicine and public hygiene. A. B. STUART. *Ibid.*

The public health. *Ibid.*

Review of the cholera epidemic in Dorpat during the year 1871. WEYRICH. *Dorpat Medicin. Zeitschr.*, iv., 3, 4, 1873.

Vital statistics of Little Rock, Ark. R. G. JENNINGS. Proc. of the Med. Ass. of the State of Arkansas. 1873.

Causes of the extension of typhoid fever. G. HAMILTON. *Phil. Med. Times*, Dec. 20, 1873.

FORENSIC MEDICINE.

The present method of conducting the forensic examinations of the insane. ZIPPE. *Wien. Med. Wochenschr.*, 51, 52, 1873.

Sandon before the forum of pathological anatomy. LEIDESDORF. *Ibid.*, 50, 1873.

Forensic psychology. T. MEYNERT. *Allg. Wien. Med. Ztg.*, 40, 41, 42, 1873.

MISCELLANEOUS.

The forces called vital. J. L. TEED. *Kansas City Med. Jour.*, Dec., 1873.

Thermometry. C. E. BUCKINGHAM. *Bost. Med. and Surg. Jour.*, 1, 1874.

Report on medical chemistry. E. S. WOOD. *Ibid.* & 2, 1874.

Nativity of parents in their relation to fecundity, proportion of the sexes, and twin, illegitimate, and still births. J. STOCKTON-HOUGH. *Phil. Med. Times*, Dec. 27, 1873.

The opium habit. W. D. MARTIN. *Ibid.*, Jan. 10, 1874.

Accommodation for the insane on the cottage plan. W. B. HALLOCK. *New York Med. Jour.*, Jan., 1874.

Quarantine without obstruction to commerce. A. W. PERRY. *New Orleans Med. and Surg. Jour.*, Jan., 1874.

Report on cerebro-spinal fever and hemorrhagic malarial fever. L. S. MCMURTRY. *Ibid.*

Cases in practice. C. M. SMITH. *Can. Lancet*, Jan. 1, 1874.

Prevention of cod-oil explosions. A. F. REICH. *Baltimore Physician and Surgeon.*

Practice of scoptzi in Roumania. BATTEY. *Atlanta Med. and Surg. Jour.*, Dec., 1873.

Medicine—its objects and capacities. TAYLOR. *Ibid.*

Proceedings of the San Francisco Med. Soc. *Ibid.*

Valedictory charge to graduates. MORSE. *Ibid.*

Irregular practitioners—adulterated medicines. HARVEY BLACK. *Virg. Clin. Record*, Dec., 1873.

On the theory of the regulation of heat. RIEGEL. *Virchow's Archiv*, 59, 1, 1873.

Third international medical congress. *Allg. Wien. Med. Ztg.*, 39, 1873.

The value of gymnastics. SEEGER. *Ibid.*, 38.

Hospital reform. RITTMANN. *Ibid.*, 42, 43, 44, 45, 47, 49, 51, 1873.

Forty-sixth congress of German naturalists and physicians in Wiesbaden. *Ibid.* & 44.

Electrotherapy and balneotherapy. KARNER. *Ibid.*, 45, 1873.

Action of the transportable pneumatic apparatus on the heart, etc. (Conclusion.) WALDENBURG *Berl. Klin. Wochenschr.*, 47, 1873.

Simple method of forced injection of liquids into the intestinal canal. WETBRAND. *Ibid.*, 49, 1873.

Injection of defibrinated blood into the subcutaneous connective tissue. KARST. *Ibid.*

Power of nature in the cure of disease. (Continuation.) CARRIL. *Anfit. Anat. Espan.*, 22, 1873.

The climate of Egypt. WALLIS. *Hygeia*, Stockholm, 11, 1873.

The doctors of the modern novel. BARTHOLOMEW. *Clinic*, v., 23.

Nature and art. BATTEY. *Atlanta Med. and Surg. Jour.*, xi., 6-7.

Report on Tennessee surgery. BRIGGS. *Nash. Jour. of Med. and Surg.*, xii., 5.

Forensic psychology. MEYNERT. *Allg. W. Med. Ztg.*, xviii., 40.

Action of permanganate of potash and quinine upon the fungi of cholera discharges. WIENKOWSKI. *W. Med. Wochensch.*, xxiii., 45.

On the disease-producing parasites. RICHTER. *Schmidt's Jahrb.*, No. 8, 1873.

Pelomyxa palustris (Pelobius). GREEF. *Archiv f. Mikroskop. Anat.*, x., 1.

The nervous system of the nematodes. BÜTSCHLI. *Ibid.*

Structure of the electrical apparatus in the torpedo. BOLL. *Ibid.*

Wagneria cylindrocomica. ALENITZIN. *Ibid.*

On the fibrilloid connective tissue of the insect-integument. GRABER. *Ibid.*

The formation of cavities in the upper incisor teeth. MÜHLREITER. *Deutsche Vierteljahrsschr. f. Zahnlikde.*, xiii., 4.

General appearances in the dentine. BAUME. *Ibid.*

Transactions of the Medical Society of New Jersey, 1873.

First annual report of the board of trustees of the Northern Hospital for Insane, Oshkosh, Wisconsin, 1873.

Report of the imperial-royal Infirmary Rudolph-Stiftung in Vienna from the year 1871.

Correspondence.

BRONCHIAL CASTS.

THE following letter, sent to Prof. Flint, furnishes some additional points to the specimen of bronchial casts presented by him at the recent meeting of the Pathological Society:

BERLIN, *Dec.* 9, 1873.

DEAR SIR—When I wrote you last the information I furnished was rather premature to give you a fair chance of understanding the case. I think the letter was dated on the 18th, and up to that time everything was correctly stated; but the next day another terrible change for me, in the symptoms, began. I was so pleased after the expectoration of the casts that I could inflate the lung so much better, that I was, I suppose, practising the new function too much, and either from the irritation of the air or some other cause, a most violent pneumonia set in in the right lung. After such frightful loss of blood I could not believe an inflam-

mation would take place, and from the pains in the limbs, chills, headache, and thirst, thought myself commencing with typhoid fever. Soon, however, the genuine rusty sputa decided the nature of my trouble. The whole lung, from apex to base, became dull, but nowhere flat; breathing became difficult, and the constitutional symptoms all proportionately severe. The rusty sputa was throughout as characteristic as I ever saw it, and very copious, lasting for about eight or nine days, after which it changed to be thick, yellow expectoration, just such as is discharged on the breaking up of a heavy "cold." The cough is all the time becoming less, only troubling me now in the morning when I rise, and the expectoration is first a little thickish yellow mucus, followed by a little stringy, transparent and frothy mucus, such as one sees in the early stages of bronchitis. I should say here that after the inflammation had subsided, I was taken one morning with a severe fit of coughing, and expectoration of a few streaks of blood, followed by another short piece of the membrane. One morning since then I had a severe fit of coughing, but no blood nor membrane. I feared such an inflammation would surely break down the lung-tissue in the vicinity of the tubercle, and matters would grow rapidly worse, but up to this time such does not seem to be the case. I have watched the expectoration very close, and I cannot find anything of the nature of pus. I am also quite sure I can breathe better with the side than formerly, and Dr. B., who attended me, says the lung is far more resonant. I took the quinine all the time my lung was bad, for I was so weak, and have only discontinued it for a few days, my appetite now being very good, and I am feeling well otherwise. When I say feeling well, of course that is comparatively so. The whole lung feels weak yet, and is easily irritated by cold air. There are also some sort of aching pains in the shoulder and at the base, in the region of the liver. All things considered, I am much astonished at being so well as I am.

Yours very truly,

——, M.D.

AUSTIN FLINT, M.D., &c., &c., New York.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 5, 1874, to January 17, 1874.

CAMPBELL, A. B., Assistant-Surgeon.—Assigned to duty at Fort Clark, Texas. S. O. 4, Department of Texas. January 8, 1874.

Medical Items and News.

NEW INSTRUMENTS.—Through misapprehension, we credited the invention of the new scissors to Messrs. Tiemann & Co., instead of to Haywood Smith, and also the pocket illuminator, which we believe is the device of Roberts, of London. The improvements made by Messrs. Tiemann consist in an arrangement to fix the blades of the scissors at any required angle, and in the case of the pocket-lantern to make the same portable and furnish a sliding bull's-eye.

THE LATE DR. JOHN E. STILLWELL.—The East River Medical Association, at a recent meeting presented a full account of the life and services of the late Dr. Stillwell, from which, in view of the impossibility of publishing the sketch entire, we present the following points: He was born in 1803, graduated at Columbia College in 18—, at the College of Physicians and Surgeons in 1836. He was married to Miss Elizabeth Gillies in 1844, and the union was blessed with three daughters and a son, who survive him.

"Dr. Stillwell was a man of very few words. One had to get within his inner life to know him; but those who knew him best, loved him the most. His business was a laborious one, engaged as he was largely in obstetric practice. He was truly a worker day and night, making sometimes as many as fifty calls in the day. In the year 1869, he moved to his late residence in 12th street, where he hoped through distance to escape a great deal of daily work, and in the quiet of his home to reap the rewards of his previous labors. He had just fairly settled himself, and bid fair for years of comparatively quiet life, when he was stricken with paralysis a year ago last fall, and although partially rallying, was never enabled to attend to his professional duties; and after spending the summer in the country, returned in the fall apparently benefited; but gradually the powers of his system failed, his mind became weaker and weaker, and on the 26th of November he died."

The following preamble and resolutions were unanimously adopted:

Whereas, This Society has again been called to mourn the loss of one of its earlier members, John E. Stillwell, who after months of protracted illness died November 26th, 1873, therefore, be it

Resolved, That in the death of Dr. Stillwell this Society has lost one whose sterling qualities as a man, and ability as physician, endeared him not only to his professional brethren, but to the community at large.

Resolved, That although seldom able to meet with us in our deliberations, from the protracted and excessive labors of his daily professional life, we who knew him best felt that he had the interest of this Society at heart, and was always deeply interested in its success.

Resolved, That these resolutions be entered in full on the minutes, and that a duly authenticated copy of the same be transmitted to THE MEDICAL RECORD and to the family of the deceased.

R. A. BARRY, M.D.,
WM. THOMS, M.D.,
D. E. MCSWEENY, M.D., } *Committee.*

WM. J. PURCELL, M.D., *Secretary.*

MEDICAL LIBRARY SOCIETY OF HARTFORD, CONN.—At the last Annual Meeting, Dr. W. A. M. Wainwright was elected President, Dr. C. W. Chamberlain, Secretary, and Dr. H. P. Atherton, Librarian.

ARMY STAFF RANK.—CHAUTAUQUA COUNTY MEDICAL SOCIETY.—At the Semiannual Meeting of this Society, Dr. A. Waterhouse, President, in the chair, Dr. J. Andrews presented the following, which was adopted:

"*Resolved*, That our representatives in Congress be respectfully requested to exert their influence in favor of the bill now pending before the Senate and House of Representatives, entitled 'A Bill to Increase the Efficiency of the Medical Department of the Army.'"

DEATH OF THE SIAMESE TWINS.—The famous Siamese Twins, Chang and Eng, died at their residence in Surry County, North Carolina, on the 17th inst. Chang had an attack of paralysis last fall, which greatly en-

feebled his body and clouded his mind. They retired as usual on Friday night, the 16th inst. Chang was found dead in his bed the next morning, and Eng survived him only about two hours, dying, it is thought, of fright. Both were married and left large families, having lived to a ripe old age.

These singular beings were born of Chinese parents, in Siam, in 1811, and were purchased of their mother at Meklong, a city of Siam, in 1829, by Capt. Coffin and Mr. Hunter, who brought them to this country. Their bodies were united by a band of flesh stretching from the end of one breast-bone to the same place in the opposite twin. After realizing a competence by the exhibition of themselves in this country and in Europe, the Siamese twins purchased a plantation near Salisbury, N. C., where they resided until their death. They married sisters, and had five and six children respectively. Owing to domestic quarrels, two houses were found necessary, each living with his wife a week at a time alternately. They attended a Baptist church in their neighborhood, and were considered very worthy members. Almost since their arrival in this country scientists have been puzzled to determine how far the twins were identical, and their death adds little to what has already been known, except that it tends to confirm the opinion of some eminent London surgeons, that their separation by surgical means would have been fatal to both. It is now thought, however, that the ligature might have been divided after Chang's death, near his body, and that the life of his surviving brother might thus have been spared. A dissection of the bodies, which is promised at Philadelphia, will be of interest to every medical man throughout the civilized world.

CONTAGIOUS DISEASES.—The Sanitary Superintendent makes the following report:

SANITARY BUREAU, *January* 10, 1874.

The Superintendent begs leave to call the attention of the Board to the fact, that the reporting cases of contagious diseases coming under their treatment is quite imperfectly performed by the medical practitioners of the city. The Board relies chiefly upon them for such information as will enable it to discharge its duty towards them and the public in this important direction, and while in the main they have co-operated with the Board in this respect, the number omitting such reports is undesirably large.

For example: during December, 1873, there were 319 deaths from contagious diseases reported to this bureau, of which number but 131 had been previously reported as being sick. There were, therefore, 188 unreported cases, of most of which we should have had no knowledge whatever but for their fatal termination, and the necessity of stating the cause of death upon the death-certificate. The whole number of contagious diseases reported for that month was 667, including the 319 fatal cases above mentioned. If we subtract the latter from the former, we find that 348 cases were reported as sick. If this report embraced all cases of contagious diseases occurring in that month, this would show a fearful mortality indeed.

It is not intended to convey the idea that physicians are, at present, unusually derelict in this regard, the contrary is true; but it has incidentally come to the knowledge of the inspectors that there is still room for great improvement.

The profession theoretically recognizes the usefulness of statistics in medical as in other matters, but to be valuable these should be accurate. Accuracy can only be attained by the cheerful co-operation of physicians, and when we consider at how little cost this might be given, it does not seem too much for the Board to expect.

Apart from statistics, however, private practitioners have seldom the time, the authority, nor always the inclinations to search for the causes of these diseases or the attending circumstances in particular cases, and to employ broad preventive measures.

Neglect in reporting cases is sometimes excused on the plea of poverty; but if contagious diseases are so prevalent as to make the postage onerous, the Board ought certainly to know it. Sometimes patients are reluctant to be exposed to the slight publicity of having their name, address, and disease entered in the book of the Board, the physician forgetting that his silence subjects him to a penalty. Oftener this neglect is due to forgetfulness, or to the absence of printed blanks, which are supposed to be indispensable. Blanks are always furnished when applied for, but we cannot be supposed to know the condition of each physician's supply.

When new blanks are printed I propose to back them with the section of the Sanitary Code referring to the subject, together with the amount of penalty which may be collected on its violation. I would most respectfully ask the Board to adopt such additional measures as, in its judgment, will secure a fuller record of those sick with contagious diseases.

All of which is respectfully submitted.

WALTER DE F. DAY, M.D.,
Sanitary Superintendent.

THE LATE DR. JONAS P. LOINES, OF NEW YORK.—The special committee of the New York Medico-legal Society appointed to draft appropriate resolutions relative to the death of our late fellow-member, Jonas P. Loines, M.D., through Dr. R. J. O'Sullivan reported as follows:

Whereas, The New York Medico-legal Society has learned with profound regret of the death of an esteemed member, Jonas P. Loines, M.D., and whilst yielding due reverence to the will of the Almighty, we desire to place on record a tribute of respect to the memory of our deceased brother; therefore be it

Resolved, That in his eminent abilities as a scientific investigator, unwearied energy and amiable character, we recognize the qualities that constitute a physician whose devotion to the discharge of his duties endeared him to all who knew him, and entitled him to the respect and affectionate remembrance of his associates.

Resolved, That these resolutions be entered in full on the minutes, and that a duly authenticated copy of the same be transmitted to the family of the deceased, and be published in the various medical journals.

RICHARD J. O'SULLIVAN, M.D.
THOMAS C. FINNELL, M.D.

CLARK BELL, Esq., President.
G. W. WELLS, M.D., Secretary.

NEW YORK PATHOLOGICAL SOCIETY.—The following officers have been elected for the ensuing year: Dr. H. Knapp, President; Dr. J. Lewis Smith, Vice-President; Dr. Geo. F. Shrady, Secretary; and Dr. John H. Hinton, Treasurer.

DR. SPEIER, of Fulda, has been secured by the Japanese government as Professor of Natural Sciences at Yeddo.

THE AUSTRALIAN MEDICAL AND SURGICAL REVIEW is the name of a new monthly journal, or rather of a journal which has been re-established after having for some time ceased to appear.

Original Communications.

LARYNGEAL PHTHISIS.

READ BEFORE THE MEDICAL LIBRARY AND JOURNAL ASSOCIATION.

By R. P. LINCOLN, M.D.,

NEW YORK.

Much confusion has resulted from the use of the term laryngeal phthisis: but for the want of a better we will adhere to this, and at the same time will endeavor to describe the conditions that we would embrace under it. Formerly under the term phthisis were placed nearly all the diseases to which the human frame was liable when there was a tendency to a wasting of the tissues, writers justifying themselves by keeping in mind the Greek φθίω, to waste, and marshalling together every disease where this symptom obtained. Latterly doubt as to its significance has also been engendered by an attempt, in the opposite direction, to limit its applicability only to those cases where there was cotemporaneous tubercular disease in the lungs.

Than to take either extreme it seems to us more in accord with our advancing knowledge of disease to adopt a more moderate view. In doing this we would wish to have abandoned the idea that a phthisis is necessarily tubercular, that a laryngeal phthisis is always a local tubercular deposit, or the result of any specific disease of which it is a local manifestation. We can then allow ourselves to look upon it as the result of a combination of morbid tendencies, both local and general, and define it as an inflammatory affection, attended by thickening and ulceration which tends to the impairment and destruction of the larynx and adjacent parts, and especially influenced by any cachexia.

Though laryngeal phthisis must have existed as a disease synchronous with pulmonary phthisis, yet, owing to the early vagueness of physical diagnosis, and the obstacles to post-mortem examinations, we find the first reference to it, and that very indefinite, by Galen. It was not till this century had passed its first decade that any undoubted and detailed account of it is found, and it is almost only within the period of the last decade—that of the laryngoscope—that our previous knowledge has been of much practical account.

Hippocrates does not mention it.

Galen's account is calculated to excite doubt in our minds, for he speaks of the affection as of little importance, and his report of its pathology is not at all like what we now know to obtain in the organic alterations of the larynx.*

Morgagni does indeed refer to laryngeal phthisis; but while he speaks of ulceration of the trachea, and reports at length several cases of tracheal phthisis, giving an account of the manner of respiration, the character of the sputa, and the appearance of the throat, yet he does not apply to the ulceration of the larynx the reasoning that leads him to call tracheal phthisis a special affection. He concludes that many of the reported cures of phthisis (pulmonary) were probably tracheal.†

Borsieri was the first to proclaim that the larynx may become ulcerated to the extent of producing hectic and death.

M. Dauble proved the existence of laryngeal phthisis with pulmonary phthisis, and that laryngeal and tracheal phthisis differed only in situation.‡ Cayal, on the contrary, thought the two essentially distinct; but his account of the symptoms of tracheal phthisis apply equally well to laryngeal phthisis.*

Louis, in his work on phthisis, published in 1825, gave accurate and careful observations on the pathology of laryngeal phthisis.

Nothing further of importance was added to the knowledge of this subject till the invention of the laryngoscope, since which time we have been able to study upon the living patient that condition which before was only contemplated after ulceration had run its course, and the interference of the physician was no longer called for.

Now erosion, congestion, and thickening, described by Louis, as preceding or accompanying ulceration and necrosis, can be combated before total destruction has preoccupied the ground, and while there is yet opportunity, if not always to cure, at least to delay the fatal termination and assuage the pain of the suffering patient.

PATHOLOGY.

To enable us the better to study the pathological manifestations of this affection, let us review in brief the opinions of men eminent in this department, who have essayed theories founded upon their respective interpretations of morbid action in these parts.

Rokitansky, when speaking of laryngeal phthisis, says: "It is so rare, we are inclined to doubt its existence," but describes its appearance when present as follows: "It is either deposited in the form of gray granulations in the submucous areolar tissue, or, as yellow, caseous, friable, tuberculous matter, is infiltrated into the mucous membrane; in either case, and especially in the latter, it rapidly softens, and ulceration is established." †

He, however, does not think the thickening of the epiglottis can be accounted for in this way.

Mackenzie, through a very large experience, ha "never seen the gray granulations referred to." ‡

Contrast with this the following conclusions arrived at by Louis, after making 295 post-mortem examinations, especially considering this subject: "I have not in a single instance met with tuberculous granulations in the substance or on the surface of the epiglottis, larynx, or trachea; so that inflammation must be regarded as the most frequent cause of the ulceration of these parts." "However, as I have already said, the irritation or inflammation due to the continual passage of the contents of cavities is not the sole cause of the ulceration we have been examining, for, though rarely, these ulcerations do exist in cases where there are no cavities."§

Further on he states that he has never observed such ulceration in cases of gangrene of the lung, where the matter would reasonably be supposed to be particularly irritating, unless tubercles existed.

M. Andral considered the mucous membrane of the larynx a frequent seat of tubercular deposit in phthisical subjects, though located in the follicles; and he attempts to controvert the deductions of Louis.‖

Niemeyer "hesitated to admit any ulcers as tubercular in which the disease, instead of springing from isolated nodules, develops from diffuse degeneration of the mucous membrane."¶

After describing all the symptoms of pulmonary phthisis, he says: "All these symptoms, however, will not warrant a diagnosis of tubercle of the larynx, unless we are able to show that the lungs too are af-

* Meth. Med., lib. v., cap. 2. † De Sed. et C. Morb.
† Trousseau and Belloc. Trans. 1841, p. 16.

* Recher. sur de la phth. tracheal. Paris, 1810.
† Path. Anat. Syd. Soc. Pub., vol. iv., p. 382.
‡ Reynold's System of Med., vol. iii., p. 462.
§ Researches on Phthisis. Syd. Soc. Pub., pp. 39, 42, and 45.
‖ Clinique Médicale, p. 490.
¶ Practical Medicine, Amer. Trans., vol. i., p. 39.

fected. They are all capable of being produced by other kinds of laryngeal degeneration." *

Cruveilhier and Rühle doubted the tubercular character of laryngeal phthisis, because they could not establish the caseous state of that lesion.†

Virchow, according to Krishaber and Peter, has observed in these ulcerations a proliferation of cells, agglomerating and passing through the same changes as tubercular granulations; and, confirming the opinion of Rokitansky, says: "The larynx is recommended to those who wish to recognize true tubercle."‡

Virchow, in a letter (Oct. 9th, 1868) to the authors of the article referred to, says: "I am certain laryngeal phthisis is due to tubercularization of the mucous membrane in the form of little, gray, transparent corpuscles, and is composed of lymphoid cells."§

He harmonizes the opinion of others by saying that owing to the exposed position of the larynx these tubercles give rise to superficial ulcers, and do not become caseous as elsewhere."‖

MM. Hérard and Cornil maintain that the microscope gives conclusive evidence of the presence of tubercles.¶

Such conflicting views among authorities so eminent may be considered conclusive that there is no one pathological state uniformly present. In fact, we have repeated the old warfare of the theory of pulmonary phthisis; and, as in this case, it is not impossible to harmonize apparently different theories by adopting a doctrine suggested by Isambert, who proposes the identity of pulmonary phthisis with the different forms now recognized and several phases of laryngeal phthisis.**

CLINICAL HISTORY.

The different tissues that together constitute the parietes of the larynx afford us examples in laryngeal phthisis of every stage of inflammation, viz.: simple redness, swelling, erosion, ulceration, and, as sometimes happens to the cartilages, necrosis and caries.

The first effect of inflammation on the mucous membrane of the larynx, as elsewhere, is a change of color. In health its color is about the same as that of the interior of the lip, namely, a pale rose, but at the onset of an inflammation it changes to a deep red, or even purple; the depth of color depends on the intensity of the inflammation, whether it is acute or chronic; in the latter state the color is not so intense as in the former; its intensity is also modified by the location of the inflammation, as upon the vocal cords. Wherever the submucous tissue is scant and the mucous membrane firmly attached, the increase of color is but slight, whilst in those parts that are loosely attached the same degree of inflammation will be attended by a deeper coloring.

This change in color is not always permanent, *i.e.*, after death the same laws obtain as in hyperæmia of other parts. To illustrate this we need only refer to the post-mortem changes that occur to papules, chemoses, etc., where pallor succeeds to the bright color that was present when the vital functions were still active. This fact, namely, non-permanence of color, has probably led to many discrepancies in accounts of post-mortem appearances, and erroneous inferences drawn therefrom.

This redness may extend throughout the larynx or be confined only to a small part. Frequently only the laryngeal surface of the epiglottis will be involved, or perhaps only the bottom of the ventricles. Its presence may usually be inferred, when we have no more positive proof, from an excess of mucus.

The opposite condition, that of anæmia, is often observed, particularly in emaciated subjects and those in the incipient or advanced stage of phthisis pulmonalis. This state does not render the presence of ulceration in some part of the larynx improbable, and we should not ignore this fact while making our examinations.

Succeeding redness we have an increase of thickness. The mucous membrane itself becomes swollen and soft, not only from the large amount of blood attracted to the part, but also on account of the infiltration of serum within its substance. But the tumefaction depends chiefly on the infiltration of the submucous cellular tissue, which in this affection readily partakes of the inflammatory action of the contiguous mucous membrane, or it may be itself the primitive seat of the morbid action where this texture is abundant and loose, as on the anterior side of the epiglottis, the aryteno-epiglottidean ligaments, and lips of the glottis. When the inflammatory action is of a more chronic character, its product may be plastic rather than serous, in which case the mucous membrane will become denser, hypertrophied, and frequently uneven, while, when considerable serum is effused, it becomes pulpy and soft, and easily breaks down, presenting a condition characteristic of another stage.

When the inflammation has it primitive seat in the submucous cellular tissue, the appearance of the mucous membrane, except the general fulness, exhibits but little alteration from normal, and in color may be even paler.

If the first conditions of redness and swelling persist, we have, sooner or later, a state first recognized and described by Louis as erosion. They exist wherever, from superficial inflammation, the epithelium has been destroyed, and are usually circumscribed. The villi may themselves be removed at the same time with the epithelium, in which case the mucous membrane will appear slightly depressed, and the color at that point, especially at its base, a little lighter than the surrounding. Usually, however, they persist, and present a bright-red, velvety appearance. Erosions are best recognized, according to Louis, by floating the specimen in water, when, according to Trousseau, the villi will stand out like the "villi seen on a dog's stomach." These villi often hypertrophy, a part being destroyed, and resemble granulations, and doubtless are often considered tubercular.

These erosions pour out a muco-purulent secretion, and when they have attained the condition resembling granulations, bleed readily to the touch.

More important than the preceding, and of a class of which erosions may be considered the first steps, are the true inflammatory ulcerations. The inflammatory process progressing, the vitality of the denuded mucous membrane soon becomes impaired, and the villi even becoming destroyed, we find an excavated ulcer with a base of submucous tissue. This latter, in turn, soon gives way, and the remaining subjacent organs form successively its base until the various cartilages are exposed or involved, and finally yield to the destructive process. This ulceration may extend not only in depth, but also in periphery, until we sometimes find the whole internal surface of the larynx involved. When the ulcers are small they are usually round in shape, but when large are oftener irregular, and may be formed by the union of several small ones. They

* Practical Medicine, Amer. Trans., vol. i., p. 41.
† Dict. Encyc. des Sci. Méd., article Larynx, Krishaber and Peter, p. 672.
‡ Dict. Encyc. des Sci. Méd., article Larynx, Krishaber and Peter, p. 672.
§ Dict. Encyc. des Sci. Méd., article Larynx, Krishaber and Peter, p. 672.
‖ Dict. Encyc. des Sci. Méd., article Larynx, Krishaber and Peter, p. 672.
¶ De la Phth. Pulmon. 1867.
** Comptes-rendus de la Soc. de Méd. des Hôpitaux, 27th Dec., 1872.

may be looked for in any part of the larynx, a favorite seat being at the arytenoid commissure and sides of the arytenoid cartilages; they are not unfrequently found upon the vocal cords.

While the effect of an erosion may be completly repaired, the cicatrix of the wound of an ulcer presents a puckered appearance, or, when extensive, its location is represented by a thin film of connective tissue, and, according to Ryland, is never healed by granulation.*

There is another form of ulceration, undistinguishable from the latter in its advanced stages, but which has a beginning pathologically distinct. As we have already seen, mucous glands are numerous, and often quite large in different parts of the larynx, and we should be prepared to find them subject to the same pathological changes as similarly constituted glands elsewhere. When they are first involved in morbid action, either when it is limited to its own substance or when due to an extension of inflammatory action from the adjacent tissues, they appear as small elevations, the size of a pin's head, with the mucous membrane covering them, shining, tense, and of a light color. If the contents of this little cyst is evacuated at first, it is found to be thicker than normal mucus, and honey-like; but later, if they retain their continuity, the contained secretion in rare instances becomes still more inspissated, and even cheesy.

It is this condition that we can easily understand might be mistaken for miliary tubercle in or on the mucous membrane, and has even been described as such by some recent writers. This same condition, never more strikingly apparent, is not unfrequently found accompanying an anæmic state of the larynx where mal-nutrition is present.

In the inflammatory state especially, the walls of these glands are unable to resist the tension from within, and finally give way when a small ulcer marks the site of each. If the degree of inflammation is considerable, the vitality of the contiguous tissues becomes enfeebled, and the destructive action will enlarge this newly formed ulcer, when its appearance and progress will be the same as the true inflammatory ulcer described above. In this form of ulcer, too, the papillæ will often appear on its border, become hypertrophied, and resemble red hemorrhagic tubercles.

Follicular laryngeal phthisis may appear independent of inflammation of other tissues, but is seldom if ever absent when the other tissues are primarily affected; and its location may be any part of the mucous surface except the vocal cords. These follicles are isolated upon the free border of the epiglottis, but increase in number till they become aggregated at its base.

When the cellular tissue of the larynx has become involved in a high grade of inflammation, instead of its terminating in resolution we may have an abscess, and particularly is this liable to happen if the perichondrium becomes involved, in which case we may have either caries or necrosis of the cartilage even to the extent of their complete destruction and expulsion.† In consequence of these abscesses opening through the mucous membrane we may have ulcerations of a fistulous character, not unlike in their history and progress anal abscess and fistulæ, at the bottom of which diseased cartilage will often be found. They usually open into the larynx, but sometimes they discharge their fetid contents into the œsophagus or pharynx.

Whatever be the origin of the ulceration, it may extend to and invade any of the cartilages of the larynx, and one or all may be affected. The loose cellular tissue by which they are surrounded, as we have seen, easily loses its vitality, and any deposit of pus immediately in their vicinity destroys their nutrient connections, and they consequently soon perish in whole or in part.

During the process of inflammation here, the cartilage is transformed into a bony substance, if a part of its nutrient supply is preserved, while another portion crumbles away, or, according to Porter, an earthy deposit similar to that in degenerated arteries takes place.* An entire cartilage may be thus transformed, when it acts as a foreign body, and an abscess results, which, examined after death, is found to contain pieces of carious bone—white, unorganized, fetid, and spongy. A greater part may have been expectorated before death, but some remnants of the debris will usually be found.

The arytenoid cartilages are most frequently affected, and after them the hard portion of the cricoid. Necrosis is usually a result of an abscess, while caries results from an ulceration starting in the mucous membrane; the former, according to Trousseau, is more common among adults, and the latter among children.†

Œdema, to some extent, is always present with any considerable degree of inflammation; and, though this is but a symptom, and, so to speak, an accident, of the morbid action, it may of itself become the cause of death.

Rarely, if ever, do any one of these pathological conditions occur singly. In any larynx where, for instance, we have caries, we find ulceration of the mucous membrane and cellular tissue, and with this, with rare exceptions, œdema and engorgement of the mucous membrane, together with follicular inflammation.

The epiglottis, being similarly constituted and subject to the same influences, is liable to the different morbid actions above considered, except necrosis. Its mucous membrane becomes thickened and indurated, as well as thickened and softened, and in either case the organ may become two or three times thicker than normal, and lose its flexibility.

While the minor degrees of ulceration are here less common than in other parts (probably because of the paucity of the muciparous glands in its upper part), the deeper forms of ulceration are more prominent in their effects and quite destructive. It is common to find it much distorted by previous inflammation,‡ and it may be even perforated. Ulceration and caries of its border result in a gnawed appearance, and may effect its total destruction.

Rees reports in *The Lancet* of March 17th, 1860, a case of strumous ulceration of the larynx, with destruction of one-half of the epiglottis; and the same journal of April, 1868, contains an account of a case with the epiglottis totally destroyed, and the wound healed. In neither of these cases was there any impairment of the voice, and but little difficulty in deglutition.

We can add to these, two cases of total destruction of the epiglottis, attended with only slight hoarseness, and but little difficulty in swallowing.

The above-described changes, that have been spoken of as belonging to the larynx, are found, under like circumstances, in the trachea, and M. Cayol has written a well-known thesis descriptive of them, under the

* On the Larynx and Trachea, p. 24.
† Galen reports a case where the whole larynx was expectorated. Young on Consumption, p. 142.

* On Larynx and Trachea. London, 1837, p. 180.
† Clinical Lectures, Am. Trans., vol. iii., p. 94.
‡ Rokitansky. Op. cit., vol. iii., p. 280.

title of Tracheal Phthisis, in which he attempts to prove it to be a primitive and tuberculous affection.*

Lænnec states that ulcerations of the trachea are much more common in perfectly healthy than phthisical persons, which statement Louis pronounces erroneous, and attributes to an error of memory.†

The mucous membrane above the larynx being histologically the same as that below, is subject to the same morbid actions as the larynx itself.

Bennet says the mucous membrane of the larynx is as liable to the same changes as all other similar membranes, and is as frequently involved.‡

Statistics upon this point, except in the case of phthisis pulmonalis, are not very satisfactory, and will not be more so till the laryngoscope is in more general use; even in these subjects we have but few sources to draw from, for comparatively few observers of autopsies have noted the condition of the larynx. The number, however, is amply sufficient to convince us that laryngeal ulceration, in whatever tissue it may have had its birth, or whatever may have been its morbific cause, is particularly common in subjects of pulmonary phthisis. Andral states that in three-fourths of the phthisical patients treated in the wards of M. Lerminier, the larynx was affected in different degrees.§

Louis gives, in his work on phthisis, the following results of 295 examinations: Ulceration of the larynx, 29 per cent.; of the trachea, 36 per cent.; and of the epiglottis, 18 per cent.

Trousseau and Billoc report five cases where examinations of the lungs were made, and no tubercles found, where death is presumed to have occurred from an affection of the larynx, attended with an ulceration of its investing mucous membrane.‖

Porter reports four cases of disease of the cricoid cartilage that proved fatal,¶ and M. Cruveilhier five similar.**

Of 23 cases of consumption, in which the larynx was examined, Ryland found 44 per cent. with ulceration.†† S. Scott Alison, out of 26 cases, in all stages of consumption at one time in the hospital, found 73 per cent. were suffering from disease in the larynx, and of those in the third stage a per centage of 83.‡‡

Of 19 cases of laryngeal phthisis, in our private practice, 14, or 73 per cent., had accompanying pulmonary phthisis; 9, or 47 per cent., would be classed as scrofulous. In four cases ulceration existed on the left side only, and in three on the right; six of these seven were in patients suffering from pulmonary phthisis, and all were affected on the side of the only or greater diseased lung. In the remaining twelve cases the ulceration was situated either in the commissure, or on both sides at the same time.

ETIOLOGY.

That hyperæmia, erosion, and ulceration of the mucous membrane of the larynx may be precursors of the deeper and more destructive morbid changes, every observer will admit, and hence, in looking for the cause, anything that leaves behind the superficial disease must be regarded as a possible step in the forms to be dreaded, and attended with danger both to the healthy physiological action of the part, and even to life itself.

Whether laryngeal phthisis, in all the different stages we have described, occurs idiopathically, is a question open to discussion; that it occurs symptomatically has generally been the accepted theory. Amongst the advocates of the former theory may be mentioned Lænnec, Cayol, Rokitansky, and Trousseau, while Louis, Niemeyer, Mackenzie, and many others support the latter.

That the less important pathological manifestations often occur without being followed by the more destructive conditions, comes within the observation of every one, as is witnessed most commonly in acute catarrhs of the larynx, as a consequence of heart-disease, and after different fevers; but whether these same appearances are the preliminary steps to, and will pass into, the more serious ulcerations of the deeper tissues, is a point of vital interest. To decide this we must extend our inquiries and investigations beyond the larynx, considering the general condition of the patient as well as the period the disease has existed in the larynx.

Ulceration of the mucous membrane, as well as of other parts, is a frequent consequence of acute inflammation; but whether this be the cause of the disease we are considering, or whether it supervenes on a chronic inflammation, or is induced by irritation in a distant part, as in pulmonary phthisis, or depends on a local tubercular deposit, neither its locality nor its appearance will alone determine.

Hence, we must include among the exciting causes the same conditions that result in acute as well as in chronic inflammation of the larynx, and which usually tend rapidly to recovery. Among these are cold and moisture, whether inspired or applied externally, as a draught upon the neck, or a neglected wetting of the feet. The simpler forms of the disease are particularly liable to be aggravated by efforts at public speaking, or violent coughing, and thus an inflammation, that was at first of a superficial character, and that otherwise would naturally pass off in a few days, will assume a chronic course, and perhaps extend to the deep tissues. Particles of inhaled dust, or other irritating substances, will frequently induce disease of the larynx as well as of the lungs themselves; imprudence in dress, from too free exposure of the neck, particularly in ladies. Prof. Alison, of Edinburgh, many years ago recognized this fact, and deprecated the practice of shaving, highly esteeming the beard, both as a protector of the throat, on account of warmth, and also because it served as a natural respirator; and he advised the stonemasons, particularly, to wear it, to filter from the respired air the particles of dust.*

Louis, at one time, following the opinion of Sylvius, attributed all these morbid appearances to the contact of sputa from the lungs, that was constantly passing over the mucous membrane of the larynx in cases of phthisis pulmonalis. His reason for this inference was, that this condition oftentimes presented itself on the posterior part of the larynx, and also of the trachea, in his examination of patients that had died of consumption. Afterwards observing a few cases where this condition was not present, and there was, nevertheless, ulceration, and also, as we have already seen, failing to find it in cases of gangrene of the lung, he was compelled to admit that there must be additional influences at work.

Though, fortunately, there are many cases of pulmonary phthisis that escape ulceration of the larynx, yet frequent observation will convince one that it only appears, in many cases, subsequent to the disintegration of the lung-substance, and after purulent expectoration has been established. That the contact of pus ought to be considered one of the causes of this affec-

* Paris, 1810.
† De l'Auscultation Médiate.
‡ Pulmonary Tuberculosis. Edinburgh, 1853.
§ Clinique Médicale. London, 1837. p. 130.
‖ Op. cit.
¶ Op. cit.
** Dict. de Méd., art. Laryngite, cited by Ryland, op. cit., p. 81.
†† Op. cit., p. 73.
‡‡ On Morbid Throat and Consumption. London, 1869, p. 6.

* Edinburgh Med. Jour., Dec., 1861.

tion, in addition to the coincidence already noted, is rendered probable from the analogous fact that we often find the integument itself excoriated and ulcerated from being constantly bathed in pus for a long time. In addition thereto we could cite several instances of cases that we have treated where ulceration of the larynx could only be explained by the contact of pus that had run down over the pharynx from the posterior nares in posterior nasal catarrh.

Exceptionally, inflammation and its consequences may appear in the larynx by reason of its extension through the continuity of surface from the pharynx, and possibly from the trachea: but when this occurs there are probably other determining causes of a constitutional nature at work that are of a progressive character. We have already seen how cases of pulmonary phthisis in its advanced stages may have a considerable influence in inducing ulceration of the larynx, but there are still a large number of cases where morbid action is already established in the larynx before the stage of purulent expectoration has been reached.

A full appreciation of this fact is of paramount importance, and upon an early recognizance of this state will often depend the future welfare of our patient. In this respect it must be acknowledged that the first evidence of the laryngeal may be but a precursor of a more formidable trouble in the lungs; both may be due to the same cause, first recognized in the larynx by the aid of the laryngoscope, before the disease in the lungs has had time to work changes there so great as to be detected by the means at our command.

Therefore, notwithstanding the many causes we have seen may in turn be considered responsible for some of the different phases of laryngeal phthisis, we would name another, which, so far as we are informed, has been altogether ignored, but which, nevertheless, may reasonably occupy a place in our list that would otherwise remain incomplete; we refer to the phenomenon of reflex action.

Prof. Brown-Séquard, in his work on the "Physiology and Pathology of Nervous Centres," shows the great power of this influence in the modification of secretion and nutrition as seen in conditions of congestion or anæmia, hypertrophy or atrophy, and ulceration. He has supported this theory both by actual experiment and by citing many unquestioned cases, among others, instances of orchitis due to irritation of the ureter by a calculus; of inflammation of the stomach from irritation of the filaments of the par vagum in the œsophagus; of pleurisy due to an irritation of the nerves of the breast by some operations; * and of two cases of peritonitis and death from an operation of the cervix uteri without intercurrent inflammation of the uterus or vagina.† There are numerous instances of inflammation of one eye extending from irritation into the other. Dr. Cain, of Charleston, reports cases that seem to show that croup may be produced by a reflex action starting from the stomach.‡

These secretory or nutritive reflex phenomena occur chiefly through two modes of action; by one the nervous system determines an increase in the attraction of blood to the tissues, when we have a congestion and its consequences; while by the other, the force, instead of acting on the parenchyma of the tissues, operates upon the walls of the blood-vessels and produces a contraction which results in anæmia and its sequelæ.§

This action through a centripetal nerve to a centre is reflected back by a centrifugal, preferably starting from the same segment.* The lungs and larynx occupy relations fulfilling these conditions essential to the exercise of this phenomena, their nerves being the pneumogastric and spinal accessory with a free anastomosis from the sympathetic.

The great abundance of this nerve-supply to the larynx is often noted, but its significance not fully understood. Luschka speaks of their remarkably free distribution in its mucous membrane terminating in oval bodies, and others provided with numerous ganglion-cells.†

From this it seems we have here eminently a field of reflex action; in fact each movement of respiration is an illustration of it, and though doubtless these nerves have other important functions, that they must be chiefly instrumental in the reflex phenomenon of coughing as well as of any organic change therein often found, is supported by reason as well as by analogy.

Another argument in support of the theory that reflex action from the lungs sometimes exercises a controlling influence in the modification of nutrition in the larynx, may be inferred from the fact that laryngeal phthisis usually commences on the side corresponding to the pulmonary disease.‡ A similar inference may be drawn from the fact that paralysis of one vocal cord, without ulceration, which sometimes occurs in cases of pulmonary phthisis, is almost always on the side corresponding with the diseased or greater diseased lung.

The excessive pain in the larynx that is often experienced by patients in the last stages of pulmonary phthisis, though there may be no lesion discoverable there, is also significant in this connection.

The inflammation and ulceration of the mucous membrane and soft parts of the larynx may itself be a cause, when once established, of further destructive disease.

When the inflammation has extended to the perichondrium this may become inflamed to a large extent, when, as happens in analogous cases with the periosteum, we have a death of the contained organ, which, acting as a foreign body, in turn gives rise to an abscess. At other times the ulcer will burrow to and through the perichondrium, and, encroaching upon the cartilage, we may have caries. In this case there seems to be a strong effort at repair, which shows itself, according to Trousseau,§ in the incomplete ossification which always takes place, and which is not observed in necrosis, where the severance of nutrition is overwhelming from the first.

The influence of the scrofulous diathesis is often apparent in this affection.

The use of this term here may seem vague, but every one recognizes a vitiating, and often controlling, condition in some systems, of a constitutional nature, slow in its development, but attended with a tendency to disorganization of different tissues, as the cartilaginous, the glandular, the skin, and the mucous membrane. The latter, which in different parts are very liable to derangement, we find illustrated in frequent discharges from the nose, ears, eyes, fistulæ connecting with mucous membranes, and in the organ we are considering, all its tissues from its mucous membrane to and including its cartilages. We further recognize two distinct varieties, the sanguine, with its clear, fair skin and delicate features, and the phlegmatic, with its coarse, dark, sallow skin and uninviting countenance. Perhaps it is only a coincidence, for

* Op. cit., pp. 162–163.
† Op. cit., p. 169.
‡ Southern Jour. of Med., 1847, p. 377.
§ Op. cit., p. 173.

* Op. cit., p. 175.
† Stricker's Histology, Am. Trans., p. 435.
‡ Cohn, On Diseases of the Throat, p. 362.
§ Trousseau and Belloc, p. 24.

the number is not sufficient to establish a rule, but of nine cases in our own practice of destructive ulceration of the larynx where struma assumed to be the controlling influence, seven would be classed among the phlegmatic.

In this subdivision of laryngeal phthisis it is common to find coexisting enlarged and diseased tonsils, and associated therewith an enlargement of all the soft parts of the pharynx, and frequently of the cervical glands.

Among the remedies that have been accused of inducing this disease, Drs. Graves and Stokes claim that in enfeebled constitutions any disease of the larynx may terminate in ulceration of its cartilage if mercury is used.*

Syphilis is a very frequent cause of destructive ulceration of the larynx, but it is beyond the limits of our plan to consider this extensive part of the field in detail, and we shall only refer to it under diagnosis.

Hereditary influence should not be so generally ignored among the causes.

When we find in the same family, in successive generations, unusually large noses or ears; or, if you please, supernumerary fingers or toes, analogy, at least, would lead us to expect in morbid changes in different organs the influence of transmission exercised, and though this is generally admitted in some of the more serious and pronounced diseases, as in pulmonary tuberculosis, yet in those less striking it is too often ignored.

We must not disregard the injurious local effect of the excessive use of tobacco and alcoholic drinks, or extremes of temperature in any drink, in one already predisposed to this affection.†

Age and sex have been considered among the predisposing causes, it being most common in middle life, and more frequent among males; but this greater frequency seems but natural, from the greater exposure to the vicissitudes of weather to which men are subject.

As for local tuberculosis ever being the cause of laryngeal phthisis, we think what has already been said under pathology is sufficient to prove how rarely this is the case, though the testimony to its occasional presence is too reliable to be questioned. On this point we will only quote the words of S. Scott Alison, which may be taken as an expression of our own experience: "Tubercular matter in masses even so small as mustard seeds, I have never seen in the larynx or trachea." ‡

Whether pulmonary phthisis may cause laryngeal phthisis, or *vice versâ*, is another question.

We have seen how frequent laryngeal phthisis is; in how many shapes it may show itself; under what conditions it appears; that it is frequently associated with phthisis of other parts, particularly of the lungs; that it may appear before, at the same time with, or after, the latter disease has been established; and it is natural to seek if there is any necessary relation between the two, and whether we shall array ourselves among the followers of Dauble, Cayol, Lænnec, Borsieri, and Trousseau, who claim that laryngeal phthisis is the frequent cause of pulmonary phthisis, or with Louis, and many more recent investigators, who believe it is pulmonary phthisis that causes the laryngeal form.

It often happens that the most divergent opinions can be reconciled, and by compromising these two views we can explain many cases that would otherwise prove perplexing. We do not think it would always be proper to place the two diseases, when they coexist, in the relation of cause and effect. The number of instances of laryngeal phthisis that we have seen in its first stages, when there was hyperæmia, erosion, and even ulceration, before any disease could be detected in the lungs, would lead us to attribute to each the same or similar causes, viz., a general diathesis, first showing itself in the most vulnerable part in a subject already predisposed by hereditary or acquired disposition. It is not unlikely the determining force in locating the first symptom of the malady may be either a cold in the throat, *i.e.*, an acute laryngitis, or a cold in the chest, *i.e.*, an acute bronchitis or pneumonitis, which once having seized hold of a system debilitated from any cause, makes it an easy prey.

(To be continued.)

* Dublin Hosp. Reports, vol. v., p. 82.

† Similar unfavorable influences, we believe, attend the use of highly seasoned food, and a too free use of common salt.

‡ Morbid Throat, p. 8.

A CASE OF ASPERGILLUS IN EXTERNAL AUDITORY CANAL.

By Wm. D. BIZZELL, M.D.,
of Gainesville, Alabama.

This case occurs in my own person. It has been about two months since my attention was first directed to my ears by an itchy, slightly uncomfortably feeling, which provoked a constant desire to pick at them, the feeling being that of an accumulation of wax in the canal. However, the amount of the secretion was about normal, but in its consistency greatly changed, looking exactly like half-melted tallow, and having entirely lost that bitter unctuousness peculiar to the cerumen. It was not, however, always of this lardaceous consistency, but in dry and scaly masses like aggregations of cast-off epithelia. It was noticed that the uncomfortable sensations were exaggerated whenever the lardaceous secretion was most abundant, the dry and scaly condition being comparatively comfortable.

I treated it as a slight inflammation of the canal, instilling, in quantity sufficient to moisten the inflamed walls, glycerine in which a small quantity of carbolic acid was dissolved (gr. ij. to ʒ i.). It is, however, but just to state that the remedy was not used sufficiently often or with that regularity that would insure success, recourse being had to it occasionally when the attention would happen to be particularly called to the ear.

However, up to the 15th of the present month, November, nothing abnormal beyond what has been described was discovered in the secretions from either ear; no discoloration, no black specks, or anything of the kind. After riding on that day a considerable distance, with a cold, sharp wind from the north-west blowing upon the right side and into the right ear, the uneasy sensation in that ear became greatly intensified, feeling as though it were completely stuffed up, accompanied by a pain recurring every few seconds, as though some sharp instrument with a twisting, boring movement was penetrating the drum. There was also a headache like that of hemicrania all over the region supplied by the facial nerve of the right side, which was perceptibly hotter to the touch than the left.

A speculum was introduced, and a superficial examination made by a medical friend, but proved negative, beyond demonstrating a reddened and inflamed condition of the lining membrane of the canal. Any movements of the lower jaw, as in chewing, yawning, etc., produced considerable pain. On the morning of the 16th all the symptoms worse. So impressed was I that there was an accumulation of some kind in the canal, that I cautiously introduced Gross's ear-scoop, and succeeded in bringing away a piece the size of a pea of this lardaceous substance, upon the free surface of which was a delicate pellicle thickly covered with little black dots. Under an ordinary hand-magnifier I thought I could make out a fungous growth.

Detaching a small portion of this pellicle, it was carefully mounted in glycerine, on a glass slide, under cover, and submitted to a power of 250 diams., which showed its development and character perfectly, resolving the delicate pellicle into an intricate network of fibres, the mycelium of the fungus, and here and there the fruit-bearing stems crowned by their sporangia; the latter, by their globular shape and intensely black color, at once proclaiming it to be the Aspergillus nigricans. A good deal more was extracted from the same ear, with the effect of giving complete relief to the symptoms, with the exception of a little stiffness, and soreness to the touch. The left ear felt but very little worse than it had felt for some time. Introducing the scoop, however, I thought I could detect in a portion of the matter removed some of the little black points, and microscopic examination showed the growth to have invaded this ear also. It was noticed that the point whence the specimen was obtained in the left ear was not nearly so deep in the canal, so near the tympanum, as that obtained from the right; in fact, there seemed to be only a small patch of the fungus in the upper wall of the middle portion of the canal. The hearing in neither ear was perceptibly affected. There is slight catarrh of the Eustachian tube of the right side. The treatment has consisted in thoroughly syringing the ear with tepid water twice a day; immediately after each syringing a delicate probe, on which is wound a small pellet of raw cotton, is thrust into the canal, till the free extremity of the cotton rests upon the tympanum. It is then gently twisted upon its axis several times, and withdrawn. This is repeated until the mop ceases to bring, on its withdrawal, shreds and flakes of that caseous and false membrane-like substance which adheres so closely that no amount of syringing can effect its removal. Then dipping one of these mops into equal parts of glycerine and water, in which is dissolved sulphate of zinc two grains to the ounce, the whole canal is thoroughly moistened with this mixture. The zinc acts on the inflamed and irritated membrane, bringing about a more healthy action. The glycerine serves to keep the medicament in a soluble state, and, constantly applied to all parts of the canal, also softening and rendering more easy of removal the cheesy exudation poured out; a thorough removal of which, together with all the sporules of the fungus, constituted the most important point in the treatment; for as long as there is a single spore the disease will return, provided it be left long enough unmolested to develop, which requires only a few hours. After the first discovery of the cause of the malady in my own case, no injections or other remedial measures were instituted for some eight hours, the removal with the scoop giving almost complete relief for the time. In about four hours, however, there would be a recurrence of the pain, and a fresh crop of the growth could be extracted.

In looking over the literature of this subject, I find Richardson, in his work on Medical Microscopy, barely mentions the existence of such a disease, and refers the inquirer to the January No. of the *American Journal Med. Sciences*, 1870, which contains a most valuable contribution on this subject from the pen of D. B. St. John Roosa, of New York City. After a careful study of this paper we find that our case coincides in all the main points with the two cases reported by Dr. Roosa, and has followed the clinical history of the disease as mapped out by him.

The inflammation which, on the authority of Schwartz and Wreden, is a necessary precursor of the disease, he infers from the history to have been present in both of his, and was also present in my case. But I am inclined to think the fungus may exist for some time without giving rise to symptoms of sufficient gravity to demonstrate its presence, provided the growth be confined to the outer half of the canal, and no special care or attention be bestowed upon the secretion removed therefrom. When, however, the deeper and more sensitive portions of the canal become involved, including the outer surface of the membrana tympani, a new and more painful set of symptoms supervene. Thus, for the sake of experiment, my left ear was left untouched for several days, none of the secretion being removed except what could be easily brought away with the tip of the little finger; yet at the end of that time the sensations experienced in the ear were about the same as at its commencement, while a thorough cleansing of the canal showed that it contained a considerable amount of the fungus in all stages of development. On the other hand, after the thorough removal of the growth from the right ear with the scoop only, the characteristic pains already described would instantly cease, recurring only after the lapse of four or five hours, when examination showed the development of a fresh crop of the fungus. One or two of these specimens exhibited complete casts of the membrana tympani. We agree with Roosa when he says that this pain is a distinguishing feature in this affection, the other symptoms being also common to inspissated cerumen, and is caused by the germinations and fructifications of the fungus. For if the pain were caused by the inflamed state of the canal, why it is clear that it would have continued as long as the inflammation existed; but we have seen that such is not the case, the pain ceasing after a thorough removal of the fungus. The microscope is necessary to perfect the diagnosis. As to my method of removing the adherent exudation and of applying medication, I do not recommend it to be generally adopted in such cases; indeed I think that even in the hands of the most skilled it would be a hazardous procedure to enact it upon a patient; but to a person thoroughly conversant with the organ, guided by the sensations, the instrument in his own hand, with proper care, there is no danger. Roosa recommends its removal by forceps, the ear being well illuminated by a speculum. This is undoubtedly the best under all ordinary circumstances. The catarrh of the Eustachian tube is improving, no treatment being used except to inflate it frequently through the day by tightly closing the nose and mouth, and using forced expiration. The characteristic pains ceased at once, and no spores have been detected by microscopy since the fourth day after the inception of the treatment already detailed.

To the reader who desires a complete exposition of this subject, including the botanical relations of the fungus, I would refer him to Dr. Roosa's paper, already cited, or to the chapter devoted to this subject in his recent work on "Diseases of the Ear."

GAINESVILLE, ALA., November 27th, 1873.

ROCKLAND CO. (N. Y.) MEDICAL SOCIETY.—At the last regular meeting of this Society, Dr. William Govan was elected President; Dr. J. O. Polhamus, Vice-President; Dr. J. Wells, Secretary, and Dr. B. Davidson, Treasurer.

DR. GEO. M. LEFFERTS.—The cuts in Dr. Lefferts's article in the last number were accidentally reversed. The laryngoscopic pictures should have been represented as seen in the mirror—that is, the epiglottis above and the arytenoids below.

Reports of Hospitals.

BELLEVUE HOSPITAL.

Notes of Practice and Peculiarities of Treatment.

CERTAIN POINTS IN CONNECTION WITH THE SURGERY OF ARTERIES.

The patient who gave occasion for these considerations was a man forty-five years of age, who had shot himself in the mouth with a pistol. The ball had passed from before backwards, from right to left, through the tongue, entered the mouth, and passed on into the posterior wall of the pharynx, lodging near the fifth cervical vertebra. He was admitted August 27th; the hemorrhage was very obstinate, but by means of ice, and chloride of zinc applied with lint, it was finally arrested. September 3d, hemorrhage returned. This calls out one practical point; and that is, cessation of hemorrhage is not evidence that the vessel is permanently closed. A vessel may bleed profusely and then cease, and then hemorrhage return as soon as the action of the heart is restored. The hemorrhage returned was not easily controlled, and ligation of the external and internal carotid arteries was resorted to, and thus far with perfect success. It is in the ligation of both of these arteries that the practical fact lies. There is one rule in surgery which is never to be gainsaid, except when the circumstances are such that it is impossible to follow it out. The rule is, a bleeding artery must be ligated above and below the point of injury, if accessible. Simple ligation of the cardial extremity of the vessel is not sufficient, for the reason that anastomosis being so abundant, the liability is that blood will return in the wound from the distal extremity of the vessel. This rule can be well observed in cases where the artery can be reached, but cannot be applied when hemorrhage occurs from a bleeding artery in a space where it cannot be exposed. Such was the condition of affairs in this case. Several arteries had been wounded in the course that the ball had taken. Two methods of arresting the hemorrhage were left to be resorted to, viz., pressure or ligation of the main vessel. From the nature of the operation and the situation of the bleeding points, satisfactory results were not to be obtained by pressure. Ligaturing of the main vessel was therefore necessarily resorted to; and in resorting to this operation another practical point was developed. Ligatures were placed upon both external and internal carotid arteries. It might seem to be sufficient to ligature the common carotid artery alone, and thereby save the double operation and the difficulty attending it. But it has been found that ligation of the common carotid artery is not sufficient to establish a permanent arrest of hemorrhage from a wounded point in the continuity of the artery, by its branches above the point of ligation, for the reason that a free communication will be established through the vertebral arteries, which will permit of a flow of blood into the internal carotid, past the angle of bifurcation in the common carotid, and thus on into the external carotid, and to the place of injury. The practical point, then, is, when branches of either the external or internal carotid arteries become wounded in such situations as will require the ligation of the main vessel, it becomes necessary to ligate both external and internal carotids upon both the sides wounded, or both internal and common carotid arteries. The application of ligature can be most easily effected upon the common and internal carotids, on account of the numerous branches given off by the external carotid, and the difficulty incident to reaching the main trunk of the vessel.

The wound in the neck was not entirely healed, and that might lead to suspicion that the patient was not entirely out of danger; for there was pulsation yet remaining all along the sterno-mastoid muscle, and why it existed was a point of interest.

CASES OF HEMIPLEGIA.

The patient was 46 years of age, married, and a tanner by occupation. Family history good, no syphilitic taint. Has been suffering from hemiplegia for two years. Loss of motion and impairment of sensation upon the right side, but there was no aphasia, as might be expected, perhaps, when the lesion producing the hemiplegia occurs in the left portion of the brain. This patient was suffering from incontinence of urine. *Belladonna* serves a very good purpose in many cases of incontinence of urine from paralysis, and is worthy of a trial in these distressing cases.

Another case of hemiplegia was noticed which presented some features of interest. The patient was a young man, 20 years of age, who gave an imperfect history, for the reason that he gave an imperfect expression to his thoughts. A kind of forgetful aphasia was developed in his case, and the hemiplegia was upon the right side.

Regarding right hemiplegia and aphasia, they are ordinarily associated; but there are cases of left hemiplegia with aphasia. Some of these cases may be explained by the existence of a double lesion, yet there are well-established cases of left hemiplegia alone with aphasia. Another point of inquiry in the case was, whether the hemiplegia was due to cerebral hemorrhage or to embolism. There was no cardiac murmur; but embolism may occur independent of cardiac murmur, although the existence of a cardiac murmur would be strong evidence that the hemiplegia was due to embolism, and not to cerebral hemorrhage.

Without renal disease, and without hypertrophy of left heart, cerebral hemorrhage in a person of his age would be rare. Both these conditions were absent. Yet the great disturbance of his intellectual faculties might lead to the inference that a cerebral hemorrhage of considerable size had taken place. The boy was in a stertorous condition for four days. When apoplexy occurs in a person over 40 years of age, an atheromatous condition of the arteries may be inferred; hence the liability of the repetition of apoplectic seizures in a person in whom it has once taken place.

When apoplexy occurs in a young person the recovery is, as a rule, more rapid than in older persons—say persons above 40 years of age. The aphasia is not generally completely restored.

Recovery from the effects of embolism, if an important vessel has become obstructed, quite commonly reaches a certain point and then ceases; that is, complete recovery from the effect of embolism is not so general as complete recovery from cerebral hemorrhage, especially in young persons. Positive diagnosis in this case is probably unsafe.

The treatment adopted consisted chiefly of nourishment, and the use of electricity to maintain muscular contractility.

AN IMPORTANT POINT IN THE HISTORY OF A CASE.

The patient gave the following history: M——, æt. 28, and well built, had been sick during the last six weeks. First had pain in the left side six weeks

ago, but no regular chill at any time. Previous to that time had had cough for a year and a half; had lost flesh at times, but was able to work, and felt strong and well until he got a wetting, and that was followed by the pain in the side, of a "catching" character, and this had continued more or less up to date—Nov. 4th, 1873. Since his admission to the hospital the temperature had risen to 102°.

Upon physical examination, but very little difference by inspection was recognized in the two sides. There was diminished expansion upon both sides. Vocal fremitus was most marked upon right side. There was dulness upon percussion on the left side posteriorly, above, and flatness at the lower portion of the left pleural cavity. Exaggerated resonance upon right side. There were crackling sounds heard most distinctly in inspiration, and somewhat in expiration, all over the left posterior region. Listening directly beneath the scapula, which can be reached by placing the hand of the patient upon the opposite shoulder, certain sounds were heard. It is believed by some of our best observers that evidences of softening, which may follow a croupous or catarrhal pneumonia, can be earliest obtained at that point—directly under the scapula. In this case there were heard either mucous râles or fine gurgles, and this was the *important question* to be determined. The sounds were high pitched. If these sounds were mucous râles, the prognosis was not necessarily unfavorable; whereas, if they were gurgles, the prognosis, although it might not be absolutely unfavorable, yet would be placed upon an entirely different basis. There were no physical signs developed by examination of anterior region of chest which would assist in determining this question. There was only dulness in right infraclavicular region accompanied with broncho-vesicular respiration, which might be suggestive. The development of phthisis in connection with a pleurisy, in the form of a broncho-pneumonia, developing itself after the pleurisy has become established, is not uncommon. The rise in temperature is a suspicious symptom, and is to be carefully watched. The rise in temperature, which the patient now has, has been developed within a few days, and whether it depends upon an increase of lung consolidation, or the advent of softening in previously consolidated lung-tissue, is the *important point* in the history of the case. The treatment instituted in such a case consists in the administration of cod-liver oil, if well borne, good air, nourishing diet, large doses of quinine to subdue the fever, and some counter-irritation over that portion of the chest which is the suspected seat of the broncho-pneumonia. The subsequent history of the case was a rapid development of phthisical symptoms.

PERI- AND ENDO-CARDITIS AND ACUTE ARTICULAR RHEUMATISM.

The patient who was the subject of this attack was a sailor, æt. 23. Intemperate. Always healthy. The rheumatic attack made its appearance in the usual manner, and the cardiac complications were developed as they are ordinarily. The noticeable feature in the case was that both pericarditis and endocarditis were developed while the patient was under the *full influence* of the alkaline treatment, and the urine was *alkaline* at the time of the occurrence of the complications. The development of a mitral systolic murmur during the progress of the rheumatism is regarded as the only trustworthy evidence of the accession of endocarditis. This murmur is also called *systolic, heard loudest at the apex*. The treatment which the patient had received consisted of

℞. Potass. acetat..... ℥ ss.
Liq. ammon. acetatis..... ℥ iij.
Sodæ bicarb..... ℥ i.
M.
℞. Acid. citricum..... ℥ ij.
Aquæ.....Oi.
M.

These two mixtures were consumed in twenty-four hours as effervescing draughts.

Anodyne mixture, consisting of

℞. Sol. morph (Mg.)..... ʒ iss.
Fl. ext. bell..... ʒ ss.
Aqua cinnamomi..... ℥ ij.
M.

Teaspoonful p. r. n.

Another feature of the case was the delirium which was present.

This might be significant of two things.

It might be due to a form of rheumatic meningitis, which differs from ordinary meningitis in not being so marked in regard to local symptoms; or it might be delirium incident to the intense fever, and the latter was probably the correct interpretation, for his temperature had been as high as 104°, with respiration at 36°. This morning, Dec. 4th, his urine is alkaline, and he is very quiet, and is placed upon quinine in five-grain doses every four hours. Good nourishment, perfect quiet in bed, and chest covered with flannel. The amount of fluid effusion is not yet very abundant in the pericardium.

WALKING PNEUMONIA.

It occasionally happens that pneumonia is developed, and will run its entire course, terminating favorably, and cause but little disturbance in the system. Such a case was that of M——, laborer, and admitted to the hospital Dec. 9, 1873. He had usually enjoyed good health; intemperate. Upon admission he had the following symptoms: Anorexia, fœtid breath, and irregular bowels. Urine negative. Temperature 102⅘. Pulse 120°; respiration 34°. His present illness had been eight days in duration when admitted, and when first attacked had a chill, flashes of heat and sensations of cold, and pain in side. He had not been in bed before his admission, nor had he been in bed since his admission, except at night. Physical examination revealed dulness in the left infrascapular region, subcrepitant râle diffused over the extent of dulness, and vocal resonance increased.

Doubtless the patient is passing through the resolving stage of pneumonia; but he has had no characteristic expectoration, and but trifling cough. This does not, however, militate against pneumonia, because such cases do occur. He has been receiving sulphate of quinine, five grains, every four hours, and to-day, two days after his admission, his temperature is 110°; pulse 106°; respiration 36°; and his appetite is improving. Such pneumonias have also been called "*sneaking pneumonia.*"

SINGLE WRISTDROP.

This belongs to a class of cases which may give some trouble in finding the cause for the paralysis. The occurrence of this particular form of paralysis, as far as the "wristdrop element" is concerned, at once might reasonably suggest the presence of lead in the system as the offender. Lead in the system gives rise to paralysis of the extensors in both upper and lower extremities. It is claimed that when the paralysis is bilateral, and wristdrop is developed, it may be regard-

ed as positive evidence that the paralysis is due to lead.

When these symptoms are well developed, the source of the poison is sometimes very obscure. It is always well to test the urine for lead, especially in these obscure cases, because by so doing the presence or absence of it may be determined, whether its source can be found or not. The patient who was the subject of the single wristdrop was addicted to the use of strong drinks, and five weeks ago the drinks got the better of him, and he brought up with single wristdrop resulting from sleeping upon his arm for several hours. In such a case, frictions, electricity, passive and active exercise are the restorative measures to be employed.

HYPODERMICS OF WHISKEY.

A man was brought into the wards of surgery of which Dr. Figeuro is house-surgeon, having a crushed foot and ankle, as the result of being traversed by a railroad car-wheel. Previous to his admission the patient had lost a great quantity of blood, and it was feared that he could never be rallied to the amputating point. Among the measures adopted for his restoration were hypodermic injections of whiskey, and these proved very efficient, not only for their immediate assistance in obtaining the stimulation of the alcohol, but they seemed to tide the man over a point at which his stomach had become very irritable and rejected whatever was put into it. An ordinary dose administered in this manner is from fifteen to thirty drops. This man's pulse was raised sufficient to warrant amputation of the leg, which was done, after applying Esmarch's apparatus for arresting hemorrhage. The apparatus was particularly adapted to this case, for the reason that it was desirable to retain all the blood possible, for the loss had already been too great. No blood was lost, and but four turns were given to the rubber-cord.

Correspondence.

THE INVENTION OF TUNNELLED URETHRAL INSTRUMENTS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I regret being obliged to ask for more space in your columns, but hope it will be for the last time on this topic. I had no intention of entering into a controversy about these instruments, for I had already said all that was necessary upon the subject in my various papers and in my book; but after reading the injurious pseudonymous attack in *The Lancet*, I thought I was called upon to defend my assailed rights.

Dr. Van Buren's communication, when stripped of its personalities and invective, contains certain specific allegations, and new issues, which I am forced to notice. To the remainder, which was entirely uncalled for, I shall pay no attention further than to say that his assertions are unsupported by proofs, and that he has utterly failed to answer my letters of October 1st and December 15th, 1873, published in THE MEDICAL RECORD, while he has endeavored to "perplex the order and simplicity of facts, to confound dates, and to wander from the main question."

Ingratitude, which the Doctor urges against me, has nothing whatever to do with this question, even though I were guilty of that "lack of virtue." I was a devoted friend to him, and believed he was the same to me, but finding myself deceived, I, not Dr. Van Buren, "gradually broke off our intimate relations." I never was the Doctor's partner, and always denied that—outside of the Medical College—I had any connection with him other than being simply his assistant when he required assistance.

He speaks, in his letter, of having called a certain operation "external perineal urethrotomy;" but his friend, Dr. Bumstead, to whom he had applied to give publicity to his claims, and whom he acknowledges to have written most judicially, says, at page 294 of the third edition of his book, "Recently, Professor J. W. S. Gouley, M.D., in a valuable article which appeared in the *New York Medical Journal*, August, 1869, has adopted the name of 'external perineal urethrotomy,' which certainly defines the operation in question better than any other term." Doctor Bumstead never would have mentioned my name in this connection, if the term had belonged to Dr. Van Buren.

Neither in his published lectures nor his paper of 1868 does Dr. Van Buren use the term external perineal urethrotomy; he speaks of "perineal urethrotomy," which belongs to Civiale, but has never prefixed the word external. To-day, January 26th, 1874, in consulting Dr. Stilling's book on stricture, etc., published at Cassel, in 1870, I find in his bibliography the name of Dr. Félix Bron, of Lyons, who, according to Dr. Stilling, in 1863, used the expression, "*urétrotomie externe périnéale.*" This clearly proves that the term belongs neither to Dr. Van Buren nor to myself.

Dr. Van Buren does not say a word, in the writings referred to above, about "bridging the end of the staff." It was myself that bridged the end of the staff, as I have shown in my first and second letters —and my statements are attested by the surgical cutlers, and by surgeons of the highest repute in the land.

He says he has in his possession these tunnelled instruments, "subject to inspection." There are hundreds of practitioners who have tunnelled instruments in their possession, and who, like Dr. Van Buren and myself, have paid for them. The Doctor alleged, through another, that he had used such instruments many years ago, before he knew me, but the name of his cutler is still a mystery. In the face of this he asserts that he proposed in November, 1865, a device which I made in January, 1864.

With regard to the non-retention of the catheter after external perineal urethrotomy, the Doctor is again at fault. I cannot avoid transcribing the following, from one of his published lectures, in which, after giving good reasons for not tying in a catheter, he says: "Besides the case of the boy now before you, which, in regard to this point of treatment, furnishes the most satisfactory evidence, Dr. Gouley, who, as far as my knowledge extends, was the first to adopt this practice, has employed it with equally good results in other cases." (See THE MEDICAL RECORD, June 15th, 1866, p. 181.) Dr. Van Buren was, at first, opposed to this practice; he urged, among other things, that it was necessary to leave in the catheter for, at least, forty-eight hours, in order that the urethra might mould itself around the instrument. He did not accept as good the practice of non-retention of the catheter until I had fully demonstrated its utility to him and to others, and he did not carry it into effect until 1867, while I had done it as early as 1860. (See my paper of August, 1869, *New York Medical Journal.*) In his letter of January 15th, 1874, he claimed this for himself. Such contradictory statements require no comments from me.

He is as inaccurate regarding conical sounds as he has been in nearly everything else he has said, and I shall take no space to discuss this question.

He is quite as inaccurate in his assertions about the

modification of Sir Henry Thompson's instrument. He had nothing whatever to do with this. The modification was made entirely by myself, and he did not even see the modified instrument until after I had used it. This is not altogether a question of veracity between us, for I have already given my proofs, while he has furnished none.

What he now says about my book, which he before praised so highly, is as inconsistent as it is inaccurate. In this book I have ignored no one who had ever contributed anything useful in the branch of which it treats; and among the many authors—American and foreign—whom I have cited, Dr. Van Buren's name appears in its proper place, with all the prominence it deserves. He says he recognizes his "teaching" in this book. I am not aware that he ever had any original views on the subject. His "teaching," in diseases of the urinary organs, is to be found in the standard works, in none of which, however, is there anything that he can justly claim as his own.

I have confined myself, in this letter, entirely to questions of fact, and would not have deemed it necessary to reiterate what I had already said upon the subject, were it not for the disingenuous assertions of Dr. Van Buren, and the side issues taken by him.

I have the honor to be,

Very respectfully, your obedient servant,

J. W. S. GOULEY.

56 WEST THIRTY-EIGHTH STREET,
NEW YORK, January 27th, 1874.

Progress of Medical Science.

THE INNER LIFE IN PLANTS.—A most valuable discovery was communicated to the Royal Society, at one of its recent meetings, by Prof. J. Burdon Sanderson, regarding the electrical phenomenon which accompany the irritation of certain leaves. It is a well-established fact that electric currents occur in animal muscle, but it has not hitherto been demonstrated that a similar principle pervades the vegetable world. The doctrine of protoplasm and the agreement as to the cause of contraction in all living substances is much affected by this new discovery; and it is not at all unlikely that the contractile substance, both in muscle and in vegetable tissue, may be proved to be protoplasm. At any rate, it throws considerable light upon the nature of contractile substances in general. Prof. Sanderson was led to investigate in this direction from a conversation had with Mr. Darwin. The experiments are simple, and can easily be repeated and verified. The opposite ends of a living leaf of dioeiæ are placed on non-polarizable and connected electrodes. A reflecting galvanometer of high resistance is inserted in the circuit, and a deflexion of the magnetic needle results, plainly indicating that a current is passing from the proximal to the distal end of the leaf. If, instead of the leaf, the leaf-stalk is placed on the electrodes, a current is again observed, but running in an opposite direction. If, the leaf being so placed on the electrodes that the normal leaf-current is indicated by a deflection leftwards, a fly is allowed to creep into it, it is observed that the moment the fly reaches the interior (so as to touch the sensitive hairs on the upper surface of the lamina) the needle swings to the right, the leaf at the same time closing on the fly. The fly having been caught, does not remain quiet in the leaf; each time it moves the needle swings again to the right, always coming to rest in a position somewhat further to the left than before, and then slowly resuming its previous position. The same series of phenomena present themselves if the sensitive hairs of a still expanded leaf are touched with a camel's-hair pencil. In experimenting on an open leaf there is this peculiarity, that no effect is produced unless an interval of from ten to twenty seconds has elapsed since the preceding irritation. After each stimulation the leaf is, as it were, exhausted, and requires time for a process of restitution. This is a characteristic point, showing that, similar though the process be in both animal and vegetable matter, it is not exactly the same. The period of latent stimulation is one-hundredth of a second in muscle, but one-third in the plant—that is, if the expression may be used, the leaf takes thirty times as long as the muscle to consider before it will allow itself to be stimulated to renewed action.—*Med. Press and Circular.*

OPERATION BY THE ELASTIC THREAD.—*The British Medical Journal* says that on the 21st of November Sir Henry Thompson demonstrated, for the first time in England, a surgical procedure which has been practised for some time past by Prof. Dittel, of Vienna. Some time ago Prof. Dittel discovered by accident the power of an elastic thread in dividing tissues, and at once began to reduce the idea to practice. He first applied it to a case of nævus of the scalp of a child; then finding that the plan quite answered his expectations, he applied it to the removal of the testicle, penis, etc., and finally to the amputation of limbs. It is not understood, however, that he proposes to employ the method in the case of the larger amputations.

The time required for the completion of an operation varies according to the amount and density of the tissues which have to be divided, *e.g.*, for the separation of the mamma from eight to twelve days are required.

Among the operations for which it is admirably adapted may be especially mentioned *fistula in ano.* One end of the India-rubber thread is passed, in the eye of a probe, up the sinus into the bowel, then caught, brought out at the anus, and tied; it cuts out in a few days.

The patient on whom Sir Henry Thompson operated was a stout, middle-aged woman, who was suffering from an ulcerating fibro-cystic tumor (cystic sarcoma) of the right breast. She had a lump in the breast for twenty years, but it caused her little inconvenience till two years ago, when it began to enlarge rapidly, and finally the skin over it gave way. At the time of the operation the tumor was of the size of a large orange, and somewhat pendulous, the breast itself being wasted; it was crowned by a large, sloughy, fungoid ulcer. The ligature used was tubular, about one-twelfth of an inch in diameter, the calibre of the tube being about one-third of this. A large nævus needle was threaded with this and a piece of twine, and passed under the base of the tumor. The elastic was then cut, the needle withdrawn, and the halves of the pedicle tied separately. The twine was passed with the rubber-tube, in order that a second tube might be introduced in case the first should break. The patient complained of pain, apparently not very severe, for about twenty minutes after she recovered from the chloroform. Dr. Dittel's paper in the *Allg. Wiener Med. Zeitung*, 1873, contains very full details of the method.

TRACHOMA TREATED BY GONORRHŒAL INOCULATION.—Dr. Léon Brière reports in the *Bulletin Générale de Thérap.*, Sept. 15, 1873, four hundred and four

cases, from various sources, of pannus treated by the inoculation of blennorrhagic virus, derived either from the ophthalmia of the new-born, or from urethral or vaginal blennorrhagia. To these he adds five cases in his own practice. Having quoted, with approval, the conclusion of Roosbrœck, who has never seen any grave accident follow so seemingly frightful a plan of treatment, and who observes, "I regard these results as so complete, so marvellous, and so extraordinary, that I do not believe anything more beautiful exists in all ophthalmology" the author sums up in the following indications and contra-indications:

1. Inoculation gives results satisfactory in proportion as the pannus has arrived at a very high degree of development (without incurable complication on the ocular surface). 2. In pannus which is generalized over the whole surface of both corneæ, accidents are most rare. 3. Inoculation must never be practised in cases of unilateral pannus, as the most scrupulous care of the sound eye will not save it from contagion. 4. Inoculation is equally contra-indicated where the pannus is partial, and where the cornea presents points. 5. In cases of double pannus, it is preferable to inoculate both eyes at the same time. It is a matter of indifference whether the inoculating matter be taken from an ocular, vaginal, or urethral blennorrhagia. An individual refractory to the influence of one kind may be affected by another virus, seemingly less active. The pus of acute urethral blennorrhagia is more active than that of the chronic disease. The material of inoculation should be picked up with a pair of forceps and deposited upon the palpebral conjunctiva. If its escape be feared, the conjunctiva may be punctured with a lancet or needle. The course of purulent ophthalmia of artificial induction is the same as that of accidental origin. Should the cornea not ulcerate, frequent applications of warm water should be made. Van Roosbrœck lets the affection take its own course. Should the cornea exfoliate (intense pain), Warlmont recommends the application of the nitrate of silver, in stick or solution.

A New Operation for Cleft Palate.—On the 22d of Nov., Sir William Fergusson (*The Lancet*, Nov. 29), in operating on two patients for the closure of the opening in the hard palate after the cleft in the soft palate had been closed, adopted a modification of a procedure which is intended to increase the chances of success of the operation. Sir William remarked that in the so-called Langenbeck operation—that is, where muco-periosteal flaps are taken from the roof of the mouth and drawn towards the middle line—the proceeding is often unsuccessful, from the fact that after some time the granulations that are thrown out on the upper surfaces of the displaced flaps contract and separate the union that may have taken place between the pared edges of the flaps. It is true, he observed, that some assert that bony matter is deposited on the upper surface, and that this diminishes the size of the aperture in the osseous palate. But, in demurring to this, Sir William said he thought it was hardly possible to strip off healthy periosteum from the sub jacent bone. He proposed therefore, instead, that in addition to making the ordinary incisions for the flaps, the hard palate should be split on each side of the opening with some sharp cutting instrument, and that the two pieces of bone should be pressed towards the middle line, and the pared edges of the soft tissues then be brought together; by this means the central opening would be closed, but two lateral apertures would be formed. But inasmuch as the two lateral openings would be but half the size of the original central one, and as there would be more likelihood of the fractured edges of bone throwing out osseous material for its repair, it was hoped that the prospect of a successful issue would be greatly enhanced.

On the Importance and Dangers of Rest in Pulmonary Consumption.—An interesting paper on this subject, by Dr. Berkart, has drawn from Dr. Horace Dobell a communication on this topic, which appears in *The British Med. Jour.* of Nov. 22. He says: "The rules for the cautious application of localized rest in lung-diseases which I recommended, as dictated by a consideration of the nature of tuberculosis, and justified by the results of my own practice, are as follows:

"1. If one lung, or a portion of one lung, or a portion of each lung, has become diseased, under circumstances which make it certain that there is no constitutional cause of lung-disease, then it is safe to secure localized rest for the diseased part, and to throw the extra work upon the sound parts; but even then it is necessary to be cautious that the extent of the lung so rested is not too large in proportion to the extent of sound lung upon which the extra work is thrown. If there is any question about this, rest of the whole body must be secured in addition to the localized rest of lung, so as to save the sound lung from as much work as possible.

"2. If there is a constitutional cause of lung-disease, but only a small area of lung at present suffering, and that in the upper lobes, while there is a capacious chest with large areas of lung in the lower portions quite sound and insufficiently used, then it is safe to secure localized rest for both upper lobes, and to make the lower portions do a fairer proportion of the work; but even under these circumstances the respirations should kept at as low a point as practicable.

"3. If a portion of lung has become disintegrated, under the influence of constitutional causes, and remains obstinately unhealed after all constitutional symptoms have been arrested, and, for some time past, no other portions of lung have shown a tendency to yield, then I think it is quite safe to secure localized rest for the disintegrated portion, so as to give it a fairer chance for healing; while an amount of air and exercise may be allowed to the patient, for the purpose of improving his reparative powers, which could not have been permitted while the damaged lung was exposed to the same amount of action as the sound parts. But even here the utmost caution is required not to carry the exercise beyond a very limited amount.

"4. If the constitutional tendency to lung-disease—the abnormal physiological state—is strong, and signs of impending mischief in the lungs are scattered, no localized rest should be attempted, but every means should be brought to bear upon the important object of maintaining respiration at its lowest point consistent with life and nutrition, until the constitutional tendency has become passive and the local symptoms have been removed.

"In conclusion, to prevent misapprehension on so vital a point, let me remind my readers that, in urging 'the importance of rest in consumption,' I am referring to cases in which the lungs are already damaged, or in which the constitutional disease has declared itself in sufficient force to render tuberculization imminent. If the symptoms are only what are commonly called premonitory, that is, if they are those of commencing tuberculosis, and no reason or sign is discoverable which justifies the suspicion that tuberculization has commenced; if a sufficiency of fat remains without calling upon the albumenoid tissues, the principles of treatment are quite opposite to those detailed."

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, February 16, 1874.

A MEDICAL CENTRE IN NEW YORK.

WHETHER it be a pleasant thing to admit or no, the Medical Society of New York is still in the process of crystallization. Our professional position is not yet fully established, and consequently we have not all the resources for the cultivation of the socialities and amenities that pertain to a refined professional association. We are still young people, of respectable and even distinguished ancestry, who have just set up for themselves—only fairly begun life. Our medical colleges—and whatever may be said about them they are the institutions that above all others give tone to our medical society—are no more to be compared to the schools for medical instruction of Great Britain, France, and Germany, than are the colleges of our border States to be likened to Harvard, Yale, or Princeton.

Our societies, if we may except one, the Pathological, spend their time chiefly in discussing questions that have been raised on the other side of the Atlantic, or in presenting *résumés* of themes that have undergone original investigation in Germany and England. Our books, except so far as they relate to clinical investigations, in which our work may be compared with that of any other country, are for the most part fluent and graceful compilations. We are not saying these rather unpleasant things at all in the way of reproach, for we are of those who believe that the medical profession of the United States is doing about the best it can under the heavy odds of imperfect resources in the way of libraries, chairs for scientific work, and a vicious system of voluntary medical colleges. By the latter we mean colleges that are simply schools, of which the teachers are the owners, and the final judges of the right to practise. We are not entirely to blame even for the bad system of education. Necessities know no law, and the necessities of a new and vast country require a less rigorous standard for the average practitioner than do the wants of the over-populated Old World, where doctors are not needed in such numbers and in such urgency as with us. While we acknowledge these deficiencies, and speak plainly of them, we yield to none in our admiration for the sterling clinical value and the operative skill of our medicine and surgery.

But the time has come when we must change all this, and ask no odds of any country in the struggle for scientific culture. Already Chinese, Japanese, Greeks, and Armenians are choosing New York as a place for medical instruction, in preference to London and Vienna, and they will soon be followed by the more cultivated races. We must begin to enlarge our resources, and to broaden our culture, in order to adapt ourselves to a new position of larger influence, which, if we act wisely, will be upon us in a decade or two. We cannot now discuss the necessity of changes in our system of instruction; we have already done so in the columns of THE RECORD, and we hope to take up the subject again, as there may be occasion. The want which we now wish to urge upon the profession of New York in particular, as one that imperatively demands to be filled, is that of a common centre, to which the profession can gather; where they can found a library worthy of the age; where they can meet in social or scientific conclave, or to welcome distinguished medical brethren who may honor New York by their presence. In fact, we need for our city a combination, if such a thing be possible, of a club and a university hall. We need a home for the profession, under whose roof all the medical societies of the city may find a place, and in whose library, laboratory, and museum our professional friends from other cities and from our country-towns may pass hours of profitable and pleasant investigation. The Medical Library and Journal Association has struggled vigorously to give us the CLUB part of such a hall; but its impecuniosity has only sufficed to furnish a tolerable library, and a good collection of journals in rather an uninviting room.

The most pretentious of our societies—the New York Academy of Medicine—a society which calls its members *fellows*, which publishes transactions at irregular intervals, and which is said to have a library in the garret of one of its members, has been engaged during the last ten or a dozen years in picking up subscriptions for the purpose of erecting a building, of which the glory of name and ownership shall belong to itself; while the County Medical and Pathological Societies, with the Journal Association, and a host of smaller and special organizations, such as the Obstetrical and Ophthalmological, may, if they choose, get admission as occupants in a strictly subordinate way. Now this plan might be feasible if the Academy of Medicine had shown in the past, or was showing in the present, such a pre-eminence in good scientific work as would entitle it to gather all our medical brood under her

not over-expansive wings. But as matters are now, it is idle to think that the active men in the County and Pathological Societies, who are many of them members of the Academy also, will consent to give up their money to the management of what, after all, is but a sister organization, with no higher claims to respect than themselves. As a sample of what the Academy is capable of doing in the way of creating enthusiasm and getting money, we may adduce its late social gathering, held under the auspices of a select committee. After a supper which certainly was not extravagant in price, but which will probably be remembered longer than the committee of arrangements could desire, the Academy proceeded to bring forth the speakers who were to furnish the sinews of war. These speeches were begun in exquisite taste by the distinguished President of the Society; but they were continued in such a prolix way by an estimable, if not eminent, member of the bar, that the audience, overcome by the supper and the speech, soon thinned out, while those who remained did not seem to have the slightest idea of subscribing one cent to the fund, which was said by the chairman of the subscription committee to be about twenty-four thousand dollars.

We are convinced that the Academy of Medicine has no such record in the years of its honorable but not brilliant existence, that it will induce the New York profession to give to it the exclusive management of a common medicine centre. If, however, the Academy will approach the profession in another way, we believe that our great want of a hall, or series of halls, may be filled. Let the Academy gracefully yield the idea that this work can be done by it alone, and appoint a committee to co-operate with like committees from the other leading societies. Let the joint committee thus formed seek to raise the money to buy, or build, or even lease a building, to be called, for example, although the name is but of small account, New York Medical Association. This hall should be managed by a board of trustees made up of the officers of the Academy, the County Medical and the Pathological Societies. The additional twenty or thirty thousand dollars, needed to secure the control of such a building, would even in panic times soon be forthcoming, under a combined and vigorous effort; while the successful inauguration of such an enterprise would be but the beginning of a series of steps necessary to make New York a great medical metropolis.

If it is found impossible to raise the whole of the additional amount, it would be better to imitate the Bar Association and hire a house, than to leave the money already raised to slowly increase for the benefit of a generation of the profession not yet on the stage. We are doing enough for the future generations, as a nation, in paying off the debt of war, all the dangers of which we have borne, to be relieved from such obligations as one of putting out our money at interest to provide a place of meeting for the coming medical man.

THE MEETING OF THE STATE MEDICAL SOCIETY.

THE meeting of the State Society was, as usual, a success. A larger number of delegates and members than usual were present, and the interest manifested in the proceedings was in keeping with the purpose of men gathered from every part of the State for professional benefit and encouragement. The choice of President was a singularly unanimous one, and reflected credit alike upon the Society and upon the one singled out to represent it.

The address of the retiring President was a model in its way, and was one of the memorable features of the meeting. The masterly handling of an old subject in such a comparatively new light proved the cultivated scholar as well as the ripe thinker.

Dr. KENDALL brought up his former resolution in regard to the choice of members of the nominating committee by the delegates from the respective districts, but apart from inviting a pretty general discussion nothing was accomplished. The plan strikes us in the main as a good one, but for the present we must be satisfied with the old way. So far the appointing powers have been judicious, and from the discrimination of the incoming President, his knowledge of the system, and his thorough acquaintance with the members, we have every reason to expect the strictest impartiality in this as in all the other administrations of the duties of his responsible office.

The new departure concerning the publication of the Transactions is one which will be watched by every one interested in the prosperity of the organization, and it is to be hoped that the results will equal the expectations of the most sanguine. The resolutions concerning the army staff rank were well put, and commanded, as they should, the unqualified indorsement of the Society.

BELLEVUE AND CHARITY HOSPITAL APPOINTMENTS.

THE following has been passed recently by the Commissioners of Charities and Correction, and speaks for itself:

Resolved, That it is the sense of this Board, that it is inexpedient for any visiting Physician or visiting Surgeon connected with the Bellevue or Charity Hospital to hold more than one position in either of the same, and that such visiting Physician or visiting Surgeon that is now holding more than one of the positions in the two hospitals named, be respectfully requested to elect in which of the said hospitals they desire to continue to hold their positions.

This resolution to take effect on 1st March next, and copies ordered to be sent to the Medical Board.

This will create four vacancies, which we hope to see filled by gentlemen who have no appointment in any other hospital.

Medical Society of the State of New York.

ANNUAL SESSION, HELD IN ALBANY FEBRUARY 3, 4, AND 5, 1874.

First Day—Morning Session.

The Society convened in the Common Council Chamber, and was called to order at 11 A.M. by the President, Dr. E. M. Moore, of Rochester.

Prayer was offered by Rev. Dr. James.

The Inaugural Address was then delivered, and, upon motion of Dr. J. G. Adams, of New York, was referred to a Committee of Three, for the purpose of taking into consideration the suggestions and recommendations contained therein, and report to the Society. The amendment of the fundamental laws of the Society in reference to non-legislation in medicine, formed the general subject of the address.

The Chair then announced the following Committees:—

Ethics—Drs. Thomas Hun, E. R. Squibb, and D. B. St. John Roosa.

Arrangements and Reception—Drs. J. V. P. Quackenbush, Wm. H. Bailey, and W. S. Ely.

Credentials—Drs. Chas. E. Rider, Robt. Newman, and G. L. Halsey.

Business Committee—Drs. S. O. Vanderpoel, W. D. Didama, and Harvey Jewett.

The Secretary read the following report of Dr. Samuel Hart, of Brooklyn, as delegate to the Rhode Island State Medical Society:

To the Medical Society of the State of New York:

Agreeable to your appointment, I attended the annual meeting of the Medical Society of the State of Rhode Island, as your delegate, on the 11th of June last. I was kindly received. It was a meeting for the annual business of the Society, which, being accomplished, the Society dined together and adjourned.

Mode of Transmission of Yellow Fever.

There being no further business by way of reports of committees and introduction of resolutions—

Dr. S. O. Vanderpoel read a paper entitled, "Mode of Transmission of Yellow Fever and Cholera as relating to Quarantine." The Doctor gave a brief outline of the symptoms and course of yellow fever, and regards those cases which are mild in their attack as being as severe in their results as the grave cases. It was to be termed an exotic disease. Once introduced, it may be developed and propagated in this country, but never originated here. The disease is of paludal origin, and is sustained by decaying vegetation, filth, etc.

There is no analogy between yellow fever and malarial fever, although both are due to what are termed miasm. One is transmissible, and the other is not.

Yellow fever is believed never to occur at an altitude of more than 500 feet above the level of the sea. It is chiefly transported from place to place by transmission of the germs by means of ships.

The opinion of physicians is unanimous that it is not spontaneously generated in ships. The ship, however, may be a powerful agent for the retention of the germs. Even the remaining of the ship in cold latitudes for some length of time is not sufficient to destroy these germs.

It is a living, vital germ, existing on ship-board wherever a favorable nidus may be situated, and filth is a powerful and common agent in assisting its detention. The holds of vessels are the most favorite situations for germs of the disease. Water of the bilge is also a favorite nidus for the retention of the germs. It may also be transmitted by clothing.

It is, however, not directly contagious from person to person. In every case where the disease was developed last season it was immediately traced to transmission by way of ships.

In cholera, the cure is entirely different, and that disease may be said to be endogenous, while yellow fever may be termed exogenous.

Cholera is also of paludal origin. It is transmissible and also contagious. It may be conveyed wherever routes of human intercourse exist, whether by land or by sea.

It is transmissible from the sick to the healthy by means of a material poison, and is capable of being conveyed to a distance. Neither great moisture nor dry air are essential to the transmission of the disease.

The essential difference between the two diseases is apparent.

As regards yellow fever, it is now regarded that five days are sufficient, if proper measures are introduced to secure thorough cleanliness and disinfection, to wipe the disease entirely out, and thoroughly eradicate the germs of the disease from ships; therefore if five days are allowed to elapse between leaving a port where yellow fever is prevailing, and arrival at a port where the disease is not prevailing, it is sufficient to prevent its spread by means of ships, if proper measures are resorted to during the voyage to give all the benefit of ventilation and disinfection and proper cleanliness, and in this manner no hindrance to commerce becomes necessitated. With regard to cholera, it is communicated in connection with the characteristic discharges from the alimentary canal; by soiling the hands, clothing, etc.; by throwing the discharges into sewers; by percolation through the soil, and communication with water-courses; by rising of watery vapor into the air; and by the discharges being dried and rendered into an impalpable powder ready for easy transmission. Choleraic diarrhœa is equally potent to communicate the disease as discharges from completely developed cholera.

Fresh cholera stools are harmless; it requires a certain amount of decomposition to render them pernicious; and a certain additional amount of decomposition renders them again harmless.

The period of incubation is probably not more than ten days. No arbitrary rules can be laid down with regard to the detention of vessels arriving having cholera on board, or which have had cholera on board at any time during the voyage. Each vessel must be regarded by itself, and its forwarding or detention is to be determined by the condition of the vessel, the isolation of the cases which have occurred, and the means which have been placed in operation for the arrest of the disease at its first appearance and subsequent progress.

The first endeavor should be to stifle the disease in its very earliest manifestations. When proper sanitary measures are adopted, the disease may be held within proper limits without materially restricting the commerce of our country.

Dr. Quackenbush introduced Dr. Wheeler, of Boston, as delegate from the Massachusetts State Medical Society.

Dr. Wheeler responded with appropriate remarks.

Dr. Snow, from Maine, was also introduced, and responded by returning thanks for his reception.

Drs. Eugene Beach, Gloversville, Fulton Co.; J. W. S. Gouley, of New York; L. D. Woodruff, of New

York; Fred. Geare, of St. Lawrence Co.; George M. Beard, of New York; G. T. Stephens, of Albany, were named as invited guests.

Dr. Vanderpoel, from the Business Committee, announced the reading of a paper by Dr. Wheeler, of Chelsea, Mass., upon the subject of fibroid tumor of the uterus.

Dr. Squibb introduced a resolution, requesting that the paper read by Dr. Vanderpoel before the Academy of Medicine of New York, be annexed to the paper just read by him, in order that the two might appear in their proper connection in the published Transactions.

The paper of Dr. Vanderpoel was then discussed by Drs. A. N. Bell, E. Krackowizer, B. F. Sherman, E. S. Wolff, and J. C. Hutchinson. In the course of the discussion the question arose with reference to the use of the terms infectious and contagious, as used in connection with cholera in Dr. Vanderpoel's paper. Dr. Vanderpoel explained that he had used the term contagion in the sense of a general term as applied to the disease being communicated from person to person, whether the real nature of the poison is infectious, or whether it is necessary that the material constituting the poison shall pass through some secondary change. There may be some periods in the course of the disease where the word infection perhaps would better express the exact condition present than the word contagion. He did not wish to be understood that he regarded cholera as being contagious. He wished to use the term in the sense in which it is used by Frascator.

Discussion was then closed.

Dr. Vanderpoel, from the Business Committee, reported the presentation of a paper upon "The Use of Sulphate of Quinine in Epistaxis," and also a paper upon "The Use of Bromide of Potassium in the Nausea and Vomiting of Pregnancy;" both papers being presented by Dr. S. Caro, of New York.

The papers were referred to the Committee on Publication.

EXTRA-UTERINE FIBROMA.

Dr. Wheeler now proceeded to read his paper, and illustrated his case by the presentation of photographs.

His case was one of extra-uterine fibroma. It was of ten years' growth, and weighed 52 pounds. Death was caused by sudden attack of hemorrhage from the cavity of the uterus. There was no disturbance of the menstrual function throughout the entire progress of the case. There was no change in the length of the cavity of the organ. No hemorrhagia, because the mucous membrane of the uterus was not invaded until the very last. She was the mother of three healthy children; the youngest was six years old. She passed the climactic period without the development of any unusual symptoms. Hemorrhage at last came without apparent cause, was profuse, and caused death within three days. There was no œdema of lower extremities, nor ascites. The tumor, at post-mortem, was found to be attached by a pedicle to the anterior surface of the uterus. The pedicle was about two inches in diameter, and, passing through the parietes of the uterus, produced the source of hemorrhage which caused the death of the patient.

Dr. Quackenbush announced the names of the following gentlemen as invited guests:—Drs. John C. Sill, H. A. Long, and Asahel Perry, of Washington Co.; Drs. Lewi, Jas. S. Bailey, Dezouche, F. C. Corliss, and Ferguson, of Albany; Dr. Henry Quackenbush, of New York City; Dr. Solomon Sias; Dr. Henry Spurbeck, of Scoharie Co.

Dr. Vanderpoel announced the reception of a paper from Dr. Wey, of Elmira, upon "Dilatation of the Stomach."

Dr. Wey also read a brief paper sent to the Society by Dr. Squire, of Elmira, upon "Vertebrated Prostatic Catheter."

The leading features of the communication were, that the instrument had been so modified as to overcome all difficulty of withdrawing the instrument; that the instrument is perfectly safe if properly constructed, and that no vertebrated catheter should be made of a size less than No. x. The only unfavorable accident is that which may attend breaking of the joints of the instrument.

An Evening Session was voted, and the subject announced for consideration at the evening session was the report of the Committee upon Hygiene, upon "Defective Drainage."

Society adjourned, to meet again at 3 P.M.

Afternoon Session—Feb. 3, 1874.

Society called to order by the President at 3 P.M.

APPLICATION OF HYDROSTATIC LAWS TO THERAPEUTICS.

The first paper read was upon "The Application of Hydrostatic Laws to Therapeutics," by Dr. Chamberlain, of New York. The paper was a description of apparatus to be employed for the application of water, either hot or cold, in the treatment of disease. The apparatus consisted of rubber tubing, with a nozzle and stopcock attached, so arranged that it will conduct fluid from a vessel above upon an object below its level. The apparatus can be used for the treatment of almost all forms of disease and conditions of system which will admit of the use of this remedial agent in any form. Removal of foreign bodies from the ear; treatment of diseases of the eye; irrigation of the stomach, etc., etc.

A substitute for the aspirator was exhibited, which consisted in a vulcanite syringe with a stopcock attached to its nozzle, and a piece of rubber tubing to which the nozzle can be closely attached by means of a vulcanite piece, and having attached to its other extremity the ordinary aspirating needle.

Dr. Vanderpoel, from the Business Committee, announced the reception of communications from the New York County Medical Society, and the Allegany County Medical Society, which were referred to proper Committees.

CHRONIC INVERSION OF THE UTERUS.

Dr. J. P. White, of Buffalo, next read a paper upon "Chronic Inversion of the Uterus." It consisted of the history of two cases of this affection which had been reduced in accordance with the principles published by him in 1856, and subsequently in 1858, and at other times also subsequent to the latter date. No new principles were advanced with regard to the operation. It was believed that the operation is sufficiently established to render confirmatory evidence uninteresting. Dr. White's uterine repository was used in the operation, for a description of which, reference was made to published Transactions of the Society. One of the cases had been in existence for twenty-two years. Eleven cases have now been reduced by the Doctor, varying in duration from immediately after the occurrence of the accident to that of twenty-two years' standing. The Doctor regards it as being absurd to call this procedure a forcible reduction, as has been done by Dr. Barnes. Gentle, elastic pressure upon the fundus is just sufficient to produce equable traction upon the vaginal connections.

Dr. Quackenbush referred to the use of the probe as a means of diagnosis in these cases, and regarded the only proper means for recognizing the existence and situation of the os uteri to consist in digital examination. The os uteri should be first recognized by the touch. He also did not regard the speculum as being of any service in determining the nature of the affection, for the tissues of an inverted uterus will present no different appearance through the speculum than many other tissues. Another remark with regard to the time at which the operation should be performed. He was of the opinion that duration was not an element of consideration with regard to the possibility of reduction; and that it is just as difficult to reduce a uterus that has been inverted five years as it is to reduce one that has been inverted fifteen years. It may perhaps be more easy to reduce an inverted uterus after the climactic period has been passed, than previous to that period. The Doctor also referred to the terms acute and chronic, but regarded the terms recent and chronic as being more expressive of the true condition of affairs.

Dr. Graves, of Corning, remarked that he was unable to draw the line between acute and chronic inversion of the uterus, as referred to by Dr. White. He referred to two cases which he had had, and which he had called acute because they occurred immediately in connection with delivery. He also referred to two other cases which had been of three and five years' standing, and he had called those cases chronic. In all those cases the uterus was restored to its proper position without difficulty, and no untoward symptoms followed the operations.

Dr. White remarked that he would regard those cases as *acute* which occurred previous to the completion of the process of involution; while those cases which occur subsequent to this period he would regard as *chronic*. He also believed that the danger and difficulty of the operation was greater immediately after delivery than when it had been in existence for twenty-two years. Duration was not regarded as having any influence upon the operation other than that just referred to. Dr. White also remarked that he would not regard the speculum as essential in diagnosis, and in his cases was only used to examine the condition of the os subsequent to the operation. He also agreed with Dr. Quackenbush in his remarks, that the sound should not be resorted to generally, but that the chief method of examination should be by means of the finger. Still, if the sound is introduced into the bladder, and the finger into the rectum, the sound may be of great assistance in arriving at a decision whether the uterus is present or not in its proper position. In cases of inversion it simply gives us negative evidence.

The Business Committee announced a paper by Dr. Wm. B. Sprague, of Genesee County, being the annual address read before the County Medical Society, and entitled, "A Plea for old Physic."

Dr. Stevens, delegate from the Ohio State Medical Society, was introduced. Dr. Stevens was formerly Professor in Miami Medical College, and is now Professor in the University of Syracuse.

Dr. A. Hosmer, delegate from the Massachusetts State Medical Society, was also introduced to the Society; also Dr. R. M. Fowler, delegate from the Connecticut State Medical Society. The delegates responded with appropriate remarks.

Invited guests were announced as follows:

Drs. W. H. Stuart, Norwich, N. Y.; Dr. Cruthers, Albany; C. H. Burbeck, Rens. Co.; J. C. Hutchinson, Rens. Co.; Moreau Morris, New York City; R. W. Barrett, Bennington, Vt.; G. W. Coake, Otego; R. H. Sabin, Troy; W. H. Rice, Oswego Co.; H. R. Ainsworth, Steuben Co.; W. G. Tucker, Albany.

Dr. Robertson, of Albany, then read a paper upon "Diagnosis of Diseases of the Eye." The subject was considered under two heads, namely, diseases affecting the external portions of the eye and its appendages, and the diseases affecting the internal structures of the eye. A brief outline was given of the various forms of disease, their leading symptoms and peculiarities. The paper gave evidence of reading upon the subject presented, and constituted a sort of epitome of the entire subject.

A paper upon the life and character of the late Alexander H. Stevens, by Dr. J. G. Adams, was presented and referred.

The Committee upon Nomination was announced as follows, by Senatorial Districts:

(1) Dr. C. R. Agnew; (2) Dr. Solomon Van Etten; (3) Dr. G. H. Hubbard; (4) Dr. Z. B. Bridges; (5) Dr. Edwin Hutchinson; (6) Dr. Wm. C. Wey; (7) Dr. E. W. Bottum; (8) Dr. H. W. Dean.

The following resolution was adopted:

Resolved, That the members of the Legislature who are in good standing in their respective County Medical Societies, are invited to attend the deliberations of this body.

A Committee of Three was appointed to carry the resolution into effect.

The Society then adjourned, to meet at 7½ P.M.

Evening Session.

Society called to order at 7½ P.M. by Dr. Francis Burdick, of Fulton Co.

Report from the Committee on Hygiene.

Report from the Committee on Hygiene being the special order of business for the evening, Dr. A. N. Bell, Chairman of the Committee, reported progress as follows:—Every County Medical Society in the State had been communicated with, and asked to send responses to the following questions:

To what extent are the diseases of your county due to insufficient drainage? How many acres of marsh lands have you in your county? Have you intermittent diseases attributable to soil saturation? Are there in your county cases of intermittent fever where surface drainage has been well regulated? What system of drainage is necessary to render your county free from malarial diseases?

The responses have been liberal, having received reports from upwards of fourteen counties.

The reports from several towns were then read. Some of these reports were well digested, and all conveyed the common import that the value of surface drainage cannot be over-estimated in preventing the development of malarial diseases.

The report from the New York County Medical Society was read by Dr. Moreau Morris.

His report was illustrated by maps showing where defective drainage was present in various parts of the city. In several places natural drainage-streams have been constantly obstructed in the construction of public works. Along these old water-courses malarial diseases have been developed, and are chiefly confined to these saturated sections. Drainage is the great prophylaxis for the prevention of malarial diseases. Proper drainage consists in the removal of all surface water which is not necessary to support vegetation.

Gen. Viele, of New York, was then introduced to the Society, and made some remarks upon the subject of hygiene, but particularly as connected with the

subject of drainage in Central Park, New York, and Prospect Park, Brooklyn. The remark was made that saturated soil is the source of more than one-half of the disease in the country. The passage of a law should be secured to compel people to feel that no one man shall flow land or do anything contrary to the interests of his neighbors in a hygienic point of view.

Report was also made from Oneida County by Dr. Samuel G. Woolcott.

Dr. Guernsey, of Dutchess County, remarked upon the propriety of securing some system of legislation to protect the people from the suffering which is now imposed upon them in many places, as the result of imperfect drainage, on account of the neglect of some individuals to give proper consideration to the subject.

Dr. C. R. Agnew, of New York, remarked that an effort should be made to secure a sanitary map of the entire State, and that we should have enabling acts by which we can meet just such conditions as sanitary science may demand. One of the most conspicuous sources of evil throughout the rural districts is the improper location of wells. Many such evils may be remedied by proper measures, secured and introduced by medical men.

Dr. J. P. Gray, of Utica, remarked that the city fathers and local authorities cannot be relied upon for any relief in the direction suggested by the subject of the evening. He regarded it as certain that relief could only come from some central power having at its head a permanent engineer, who shall have control of the entire matter. Assistants may then be located at different points throughout the State, for local authorities are generally entirely indifferent with regard to these matters. Several cases were referred to, illustrating the evil effects of improper drainage.

Dr. Snyder, of Montgomery County, also mentioned several cases illustrating the evil effects produced by improper drainage in the development of fevers of various kinds; and if some relief could be obtained by law it would be very beneficial and desirable. He was of the opinion that cheese factories are a very prolific source of typhoid poisoning, and cited several cases illustrative of his opinion upon this point. He related one case in which he believed that a family were poisoned on account of the cows drinking water from a pond which was impregnated with drainage from a cheese-house, pig-yard, and privy.

Dr. Wey moved a vote of thanks to Gen. Viele for his highly instructive remarks. Motion unanimously carried.

The President remarked that a committee should be appointed to take the entire subject into consideration, and that such committee should have plenary power of action. The Doctor then made quite extended remarks relative to the subject under consideration.

Dr. Sherman, of Oswego, remarked with regard to the location of privy vaults, and cited cases in illustration of the development of typhoid fever as the result of drinking water that had been contaminated by percolations from privy vaults.

Drs. Thomas Hun, J. P. Gray, and J. P. White were announced as a Committee upon the President's Address.

The Society then adjourned, to meet the next day at 9.30 A.M.

Second Day—Morning Session.

Society called to order at 9.30 A.M. Prayer was offered by Rev. Dr. Darling. Journal of previous day read and approved.

The first paper for the morning session was read by Dr. Knapp, of New York, upon the "Pathology of Tumors of the Eyeball," illustrated by microscopical specimens.

The subject of the paper was illustrated by large mountings of tumors in glass cells, by diagrams upon the black-board, and by microscopical specimens, thereby giving both macroscopical and microscopical appearances. The specimens embraced chondromata, sarcomata, gliomata, glio-sarcomata, melano-sarcomata, etc.

Pathological changes were briefly and concisely alluded to in connection with salient points of clinical and operative importance. Some remarks were also made upon the question of diagnosis, to the effect that, in the earlier stages, intra-ocular tumors produce no irritation whatever. In arriving at diagnosis, perforation of the coats of the eye and laceration of the retina are not only justifiable, but commendable. Attention was also called to diagnosis by means of the ophthalmoscope specially devised for the purpose.

The paper was discussed by Drs. Noyes, Graves, and Rider.

Dr. Noyes called attention to the fact, in matter of diagnosis, that certain appearances within the eye following cases of cerebro-spinal meningitis, closely assimilate the appearance of intra-ocular tumors. Early diagnosis and extirpation of intra-ocular tumors is the only safe method of treatment.

Dr. Graves regarded it as important that we should endeavor to get behind all external manifestations, and arrive at what the change consists in which changes a normal cell into an abnormal cell; this would perhaps enable us to determine the distinction between benign and malignant forms of disease.

Dr. Noyes remarked that, practically speaking, intra-ocular tumors necessitated extirpation of the eye; so that, the fact of being malignant or non-malignant, practically, was not of such absolute importance.

Dr. Knapp recalled a case in which operation had been performed upon an intra-ocular tumor successfully without extirpation of the eye.

Dr. Rider also gave the history of a tumor of the iris which was operated upon, and the patient recovered with preservation of vision.

A paper upon "Hæmoptysis," by Dr. Leaming, of New York, was announced. Referred.

Report of Dr. Caro, as delegate to the Pennsylvania State Medical Society, was announced and referred. Biographical sketch of Dr. R. S. Allen by Dr. T. B. Reynolds. Referred.

Dr. John P. Gray next read a paper upon the "Pathology of Insanity." His paper was illustrated by photo-micrographs, and embraced investigations upon fifty-two cases. The results of the investigations were as follows:

In chronic mania and dementia the increase of interstitial, granular, amorphous matter and connective fibres, or, in other words, the hyperplasia of neuroglia, both in the gray and white substance, has been characteristic of the disease, reaching the highest limits ordinarily in the gray matter, and appearing more conspicuously in the anterior than the posterior region of the brain. The degeneration has usually originated in localized regions, circumscribed in a cystic cavity formed by condensed minute connective-tissue fibres.

The condition of the brain in epileptic insanity, and especially the alteration of the medulla, agree in appearance and character with those pointed out and described by Dr. Echeverria in his work on epilepsy.

An instance of syphilitic insanity, acute in character, was referred to, and the pathological change de-

scribed adds further proof of fatty degeneration which constitutional syphilis brings about in every tissue.

Special attention was called to changes which occur in acute mania. There is a uniformity of lesion in these cases. Dr. E. R. Hun has described the lesion as follows: "Examined by transmitted light they could be seen to be studded with small white spots, which were very numerous and of variable size. Under the microscope these spots presented a granular appearance, and many of them contained a number of elongated crystalline bodies of a pale greenish color. Their edges were not well defined. They were circular or oval in form, and varied in size from $\frac{1}{\pi\delta}$ to less than $\frac{1}{\pi\delta\delta}$ of an inch in diameter. In some instances the nerve-fibres seemed to pass through them, but as a general rule they seemed to be destroyed." Although the cases thus far examined may be regarded as insufficient to general conclusions, they go to strengthen the conviction sustained by the laws of general pathology, that insanity is a physical disease of the brain, and that the mental phenomena are symptoms. Further, that the microscope, with patient and close investigation, will continue to disclose structural changes in the cerebral tisue, as marked as those heretofore unsuspected when examinations were limited to the scalpel and naked eye; and in these investigations, when the entire range of the disease, in every stage of its progress, shall have been brought under the microscope, we may be able to solve the problem of the morbid processes denominated insanity.

Another conclusion to which these investigations would naturally lead is, that the variety and changes in the predominant symptoms of insanity may acknowledge their cause, not so much in the variety of lesions as in the special parts of the cerebral centres which are morbidly involved in each case; or, to bring the idea within narrower limits, that emotional, ideational, and motor disturbances have their foundation in the extent and degree to which the nerve elements that muster to the execution of intellectual and motor acts are involved in the lesion. When the disease reaches its ultimate stage, in all forms of insanity dementia is the final result. From continued investigations, the Doctor feels justified in expressing the same conclusions heretofore reached in May, 1873.

Dr. Squibb next read a paper upon "Ergot and its Preparations." In closing, he recommended oleic acid as a solvent for remedies to be applied by the *dermic* method.

The paper was discussed by Drs. Caro and Corliss.

The following were named as invited guests:

Drs. A. Van Derveer, H. S. Case, Geo. A. Jones, Albany; James S. Button, Auburn; E. G. Clark, Wash. Co.; R. J. Goodwin, Conn.; Conant Sawyer, Essex Co., N. Y.; Dr. Devoe, Albany; S. V. Morris, New York City.

Dr. Squibb, at this point, made some remarks regarding the liability to the production of abscess by the use of a hypodermic syringe which had been used in septic cases. Abscesses, almost indefinite in number, may be produced in this manner unless the syringe is properly cleansed. The only proper method of cleansing is to submit the needle to the flame of a spirit-lamp. This can be done without injury to the instrument.

The following report from the Committee on Publication was presented:

"The Committee on Publication would respectfully report that, for the first time in their memory, the Legislature have refused to make appropriation for the publication of our Transactions. This placed the Committee in a position in which it was delicate to act, and the question naturally presented itself, Shall we initiate a new mode of publishing our Transactions, or shall we leave that to the action of the Society? We concluded to be guided by the Society, and carry out their directions. We would state, further, that the New York City Medical Society the Monroe Co. Medical Society and some others have lately offered to pay proportion of the expense of publication.

J. V. P. Quackenbush,
H. B. Whiton,
Wm. H. Bailey.

Dr. George M. Beard there read a paper on "A New Method of treating Malignant Tumors by Electrolyzing the Base."

Dr. Beard stated that for three years he had been treating malignant tumors by a method which he devised and first used in 1871. He called this method *electrolyzation of the base, or working up the base.*

In the ordinary method of electrolysis of tumors, the needles are plunged directly into the growth. In the method of working up the base, the needles are not inserted into the body of the tumor, but *into and around the base*, so as to act upon the surrounding healthy tissues.

The ordinary method of electrolysis is the proper method for nævi, benign cystitis, and aneurism, and it relieves and cures very many of these tumors, as Dr. Beard had confirmed by a variety of cases. The ordinary method is also of value in goitres and some fibrous growths; it makes such tumors smaller by a certain percentage, even when it does not cure them. Its use in such cases is now recognized.

But the ordinary method of electrolysis is not sufficient for *malignant* tumors; it but rarely cures them, even the softer forms, as epithelioma, and then must usually be several times repeated.

When the method of working up the base is used, the body of the tumor may be removed by the knife or the ligature. When the tumor is small and accessible, the negative needle is plunged directly beneath it, while the positive is applied also beneath the tumor, and very near the negative needle. With a strong current used in this way—either being of course employed—tumors of considerable size may be electrolyzed off, and at the same time the base thoroughly worked up.

Dr. Beard exhibited some long, spear-shaped needles that he had devised for the method of working up the base; also a harrow-electrode that he had devised for the same purpose.

In his experiments with this method during the past three years he had had the co-operation of very many physicians and surgeons, and especially of Dr. A. Crosby, who had worked with him in a number of cases of malignant growths of the lips, face, breast, neck, vagina, and rectum.

The advantages that Dr. Beard claimed for this method over the ordinary methods by the knife and ligature, and caustics, were these:

1. The tumors do not so readily recur, at least so far as present experience can show, provided they are so accessible that the method can be thoroughly used. Tumors which, when operated on by the knife and ligature, had recurred at once, had now stayed away one, two, and three years.

2. There is probably less liability of pyæmia. Although he had operated many times in the rectum and vagina by this method, and on debilitated cases, no case of pyæmia had yet occurred.

3. There is less liability to shock than when the knife is used. Electricity is the best of all antidotes to shock.

The two disadvantages of the method are, that it is long and somewhat tedious, and is followed in some cases by irritative fever.

The effects of electricity when used for electrolysis is mainly of a *chemical* and *local* character; destruction of tissue and cauterization are simply incidental and accompanying results, and it is by its local and complex chemical effects on the tissues around the tumor that the cures are effected. He assumed that malignant tumors were originally local diseases, and did not claim any constitutional effects from his method.

Dr. Beard stated that longer time and larger induction were needed to permanently establish the advantages claimed for the method of working up the base, and that he was still investigating the subject with the co-operation of the best surgical skill; and would report the results of his investigations at the next meeting of the Society.

ELECTROLYSIS IN STRICTURE.

Dr. Robt. Newman, of New York, next presented the leading features of a paper which he had prepared upon "Electrolysis in Stricture of the Urethra." Having ascertained the number of strictures and their sensibility, and the susceptibility of the patient, the electrical apparatus is properly attached to bougies, the positive sponge is placed in the hand of the patient, the bougie is introduced to the stricture, and the battery opened gradually, using first a single cell of the battery, until slight burning sensation is produced, but not carried farther. This action produces galvano-electric decomposition and absorption. The current must be kept steady, and all shocks avoided. The stricture can be felt to yield, and soon the bougie will pass throught it. The operation should be repeated only as often as two or four weeks.

He had succeeded in all cases during three years past which had been treated by this method. Sitting at each time may be continued ten or fifteen minutes, according to the necessities of the case. Drescher's battery was regarded as being the best.

The paper was discussed by Dr. Beard, and this method of treatment was regarded as serviceable if properly and carefully applied. The kind of battery employed he did not regard as being important.

The last paper for the morning session was read by Dr. E. H. Parker, of Poughkeepsie, upon "Sleeping Doctors." The paper was a *résumé* of the methods of operation by clairvoyants and spiritualists, and some reflections upon the same, relative to the effect one mind has upon another.

Adjourned to 3 P.M.

Second Day—Afternoon Session.

The first paper of the afternoon session was read by Dr. A. Jacobi, upon "Embryological Demonstrations." The Doctor first exhibited an embryo at the end of the fourth week of gestation.

Allusion was made to the development of the arterial system, and what the result would be when arrest of the development took place—for instance, at one of the common iliac arteries—all the parts which are hereafter to be supplied by this vessel will be absent. A large and well-developed specimen was exhibited illustrating this malformation.

It is probable that many cases of so-called spontaneous amputation are due to this cause. The Doctor does not regard it as probable that spontaneous amputation occurs subsequent to one month of utero-gestation. Amniotic bands may be formed so as to accomplish amputation. A specimen was also presented illustrating meningo-encephalocele, with double sac and partial development of brain. There was a bony bridge between the two sacs, which was regarded as very unusual. This was probably due to an inflammatory hyperostosis.

Allusion was also made to the history of a case in which no hair has been developed, and the child is now four years old. The case was considered unique, and its explanation must be referred to some embryological fact. There was probably an arrest of development affecting the structures necessary for the development and sustaining of this cutaneous covering.

The next paper was read by Dr. J. Marion Sims, of New York, upon "Fibroid Tumors of the Uterus," which will appear in a future number.

Invited guests were announced as follows:—Drs. H. W. McGregor, Albany; S. W. Carmichael, Sand Lake; H. G. M. Mill, Warren Co.; J. M. Bigelow, Albany.

The next paper in order was by Dr. E. Krackowizer, upon "Perineal Lithotripsy." The paper will be published in full in a subsequent number of the Record.

The Committee upon Hygiene was then announced by the Chair, and consisted of Drs. A. N. Bell, S. O. Vanderpoel, H. D. Didama, H. W. Dean, Stephen Smith, and C. R. Agnew.

The chair remarked that, in the appointment of this committee, he did not wish to be restrictive or personal, but designed it as a recognition of the good work which had been performed by the old committee, and had made but a single change, and that was at the solicitation of the member of the old committee who had been removed.

Dr. Eliot made the motion that the committee, as now standing, be empowered to take such steps as, in their wisdom, they may deem proper for the purpose of securing such legislation upon the subject as may be necessary. Adopted.

URETHROCELE.

Dr. L. B. Cotes then read a paper upon "Urethrocele." The paper consisted of a history of a severe case of this affection. There is now much improvement in the patient, subsequent to the operation. Reference was made to the Transactions of 1871–2 for a complete history of the disease, and the proper point for the operation of cystotomy.

CARDIAC AFFECTIONS AND EYE DISEASES.

The next paper was read by Dr. Geo. H. Stevens, on "The Relation between Cardiac Affections and Diseases of the Eye and Ear." Reference was made to Graves's disease, or exophthalmic goitre. This disease is known to be a nervous disease. We have reason to believe that a similar irritation of the cardiac plexus may be the cause of diseases of the ear as well as ophthalmic affections. Some cases of ear affection were referred to, in the belief that they were due to cardiac complications.

Invited guests were announced: Drs. Geo. Basten, Rondout; A. T. Douglas, Rondout.

THE SELECTION OF THE NOMINATING COMMITTEE.

Rules were suspended for introduction of resolutions. Dr. Kendall moved to take from the table a resolution which was presented last year. Carried.

The resolution, as offered last year, was then offered. The resolution is as follows:

Resolved, That the By-Laws of this Society be altered so that section 11 of paragraph 3 shall read as follows: At the annual meeting, at the close of the morning of the first day, the members of the Society shall be or-

ganized into eight Commitees, by Senatorial districts, as established by the law of 1836; the members present from each district constituting one Committee, each of which shall elect one member; the members thus elected, with one appointed by the President as chairman, shall constitute the Committee on Nominations.

Dr. Kendall then discussed the resolution and urged its adoption, on the ground that the wishes of the profession in all sections of the State can be better met with regard to the formation of the Nominating Committee.

Dr. Pomeroy, of Wayne County, also discussed the resolution in the same general spirit, of a desire to recognize the wishes of the membership from all portions of the State. As long as the present system continues mistakes will be made and dissatisfaction be given.

Dr. Squibb regarded the chief objectionable feature of the proposed resolution to result from the paucity of representation from the rural districts. Mistakes will be made at best; and will not the substitution of a new plan for one which now gives very good satisfaction, be somewhat hazardous so far as securing harmony is concerned?

Dr. Corliss believed it proper to cast about and endeavor to get upon the ground which would best secure the perpetuity of the Society, and now the Society is just at an important crisis, or will reach it within a short time.

The whole subject was laid upon the table indefinitely.

Adjourned, to meet in regular session Feb. 5th, at 9.30 A.M.

Assembly Chamber—Evening Session.

Pursuant to adjournment, the Society met in the Assembly Chamber at 8 P.M., and listened with attentive interest to the valuable address delivered by the President, Dr. Moore.

After the address, the Society and invited guests repaired to the Delavan House, and were entertained by a grand collation given by Dr. John Swinburne, of Albany.

Third Day—Closing Session.

Society met at 9.30 A.M., and was called to order by the Vice-President, Dr. Burdick. Prayer was offered by Rev. Dr. McGee. Minutes of previous day read and approved.

Dr. S. D. Bowker, Central City, Colorado; Dr. Darwin S. Orton, Fulton Co.; Dr. Edward Duffy, Albany, were announced as invited guests.

THE PUBLICATION OF THE TRANSACTIONS.

The Committee recommend the appointment of a Committee to examine the laws and report at the next meeting of the Society what modifications, if any, are necessary touching the incorporation or organization of the State Medical and County Medical Societies; and of other matters of legislation pertaining thereto.

The Committee also recommend that State aid be no further invoked for the publication of the Transactions of this Medical Society, and that this Society publish its own Transactions; that the expense of the same be met by a system of assessments on permanent members and County Societies; that all existing permanent members be requested to pay annually to the treasurer of the State Society the sum of $3, and that all permanent members hereafter elected be required to pay annually the same sum, which payment shall entitle them to a copy of the Transactions. That the County Societies, at a meeting before the annual meeting of the State Society, shall assess the members of the same not less than $1.50 each, which amount the treasurer of each County Society shall remit to the treasurer of the State Society on or before Feb. 1st of each year, which shall entitle the members of the several County Societies to one copy of the Transactions for each $1.50 remitted. Further, that all the funds thus received by the State Society shall be appropriated to the publication of the Transactions and other necessary expenses of the Society.

Further, that the Committee on Publication shall publish as many copies of the Transactions as may be necessary, and in such manner as may be deemed most advantageous to the interests of the Society, and that not less than 1,200 extra copies be published for this year. Respectfully submitted,

Thomas Hun,
Jno. P. Gray,
Jas. P. White.

After some discussion, the report was adopted as an experimental matter for one year.

Dr. Gray introduced the following resolutions:—

Resolved, That the Secretary be instructed to have the report of the Committee upon Hygiene and the discussion thereon printed as soon as practicable, and sent to every County Medical Society in the State as a communication from this Society.

Resolved, That the Secretary be instructed to urge upon the County Societies the importance of having Committees on Hygiene incorporated with the standing Committee on Hygiene of the State Society, and that the investigations of the County Committees in this regard, on the approval of the respective County Societies having such committees, be forwarded to the Committee on Hygiene of the State Society, in order to be summarized by that Committee in their annual report. Adopted.

ARMY STAFF RANK.

Dr. Squibb introduced resolution relative to the rank and pay of army medical officers, heartily supporting the memorial of the American Medical Association to Congress with regard to that question. Adopted.

A paper was announced upon a case of "True Bony Anchylosis of the left Lower Jaw successfully Treated," by Dr. James L. Little, of New York. Referred.

A paper was then read by Dr. Van Derveer, of Albany, upon a "Penetrating Wound of the Cranium." The ball was removed and recovery is complete. Patient was presented.

ADJUSTABLE DRESSING FOR FRACTURE.

The next paper was read by Dr. S. F. McFarland, upon "Adjustable Dressing for Fractures." The dressing is composed of paper cut into strips from one-half to two inches in width, according to the size and shape of the part to which they are to be applied; these are to be covered with flour-paste, and adjusted to the limb in a circular and longitudinal direction, applying circular strips first. The paper should be thin, strong, and elastic. From ten to twenty layers are required. Its advantages are convenience of application; lightness and compactness; strength and elasticity; durability; readiness with which it can be adapted to the varying size of the limb by being cut open, and lacing; and the comfort of the patient. It requires several hours to get dry.

Dr. Morris mentioned a striking illustration of American habit in eating. The man was overheard to complain of having dyspepsia. The Doctor noticed him getting outside of three boiled eggs, two good-sized potatoes, a beefsteak, a glass of milk, a cup of coffee,

a glass of water, and four buckwheat cakes at breakfast, in the astonishing length of two minutes and ten seconds of time.

Question—Was his ailment dyspepsia or barbarism? Referred.

PRIZE ESSAY.

The Committee reported that the essay upon "Colles' Fracture" had been awarded the Merritt H. Cash Prize, and that the motto of the essayist was, "The hope of an indigent devil." Upon opening the envelope there was found the name of Thos. K. Cruse, M.D., Member of the County Medical Societies of New York and Westchester.

The President announced that he had appointed Dr. Segur upon the Committee upon Hygiene, supposing him to be a member of the State Society; but as he is not, he should be obliged to withdraw the name.

The following subject was announced for the next prize:—

"School hygiene, in reference to the physiological relations of age and sex to mental and physical education."

The committee also solicited essays for the Brinsmade Prize upon any physiological, therapeutical, or pathological subject, according to election of the competitor.

The report of the Treasurer was read, accepted, and adopted.

Resolution was offered and adopted, that the Treasurer shall immediately urge delinquents to the treasury to pay up.

Dr. Wey, from the committee to whom was referred the duty of recommending to the Regents of the University of the State of New York, with regard to the appointment of a board of examiners, in accordance with the laws of 1872, presented the following names: E. M. Moore, Alonzo Clark, E. Krackowizer, John P. Gray, S. O. Vanderpoel, E. R. Squibb, John Ordronaux, A. Jacobi, and Thomas Hun.

The committee thus named were empowered to fill any vacancies which may occur.

ELECTION OF OFFICERS.

Report was adopted.

The report of the Nominating Committee being next in order, the following report was offered, accepted, and adopted, and followed by an election of the entire ticket:—

For President—Dr. Geo. J. Fisher, Sing Sing.

For Vice-President—Dr. Harvey Jewett, Canandaigua.

For Secretary—Dr. Wm. H. Bailey, Albany.

For Treasurer—Dr. Charles H. Porter, Albany.

FOR CENSORS.

Southern District—Drs. E. R. Squibb, Brooklyn; E. H. Parker, Poughkeepsie; and Elsworth Eliot, New York.

Eastern District—Drs. Henry B. Whiton, Troy; Jas. L. Babcock, Albany; and John P. Shaver, Little Falls.

Middle District—Drs. M. M. Bagg, Utica; W. D. Bassett, Cooperstown; and C. G. Bacon, Fulton.

Western District—Drs. L. B. Cotes, Batavia; Harvey Jewett, Canandaigua; and Caleb Green, Homer.

FOR COMMITTEE ON CORRESPONDENCE.

First District—Dr. Thomas Addis Emmet, New York.

Second District—Dr. Wm. P. Townsend, Goshen.

Third District—Dr. Henry B. Whiton, Troy.

Fourth District—Dr. Taber B. Reynolds, Saratoga.

Fifth District—Dr. Samuel G. Wolcott, Utica.

Sixth District—Dr. John G. Orton, Binghamton (Ch).

Seventh District—Dr. Henry B. Wilbur, Syracuse.

Eighth District—Dr. Chas. E. Rider, Rochester.

FOR PERMANENT MEMBERS.

First District—Drs. Gurdon Buck, New York; and Alexander Hutchins, Brooklyn,

Second District—Drs. A. T. Douglas, Rondout; and Bradley G. McCabe, Monticello.

Third District—Drs. Alexander McVidder, Schenectady; and James S. Bailey, Albany.

Fourth District—Drs. Elisha H. Bridges, Ogdensburg; and Edmund S. Walker, Ilion.

Fifth District—Drs. Judson B. Andrews, Utica; and Wm. H. Rice, Phœnix.

Sixth District—Drs. Wm. H. Beardsley, Coventry; and E. C. Moe, Groton.

Seventh District—Drs. James D. Button, Auburn; and R. W. Pease, Syracuse.

Eighth District—Drs. Wm. B. Sprague, Pavilion; and B. L. Hovey, Rochester.

ELIGIBLE FOR PERMANENT MEMBERS.

Third District—Samuel Cross, Cobleskill; Israel C. Bourne, Masonville; and George P. Salmon, Hudson.

Fourth District—Asa W. Tupper, N. Granville; and Harvey Gray, Greenwich.

Fifth District—Jos. Gardiner; Hiram G. Dubois, Camden; and F. W. Root, East Hamilton.

Sixth District—Chas. B. Richards, Binghamton; and Judson C. Nelson, Truxton.

Seventh District—Wm. Oliver, Penn Yan.

Eighth District—Thos. D. Strong, Westfield; and J. W. Palmer, Victor.

HONORARY MEMBERS.

Drs. J. Matthews Duncan, Edinburgh, Scotland; Washington T. Atlee, Philadelphia, Pa.; William Boeck, Christiania, Norway; Benjamin W. Richardson, London, England; James W. Brown, U. S. Army; Mr. T. Spencer Wells, London, England.

ELIGIBLE FOR ELECTION TO HONORARY MEMBERSHIP.

Drs. Francisco Dicheira, Palermo, Italy; Louis Vecker, Paris, France; J. M. DaCosta, Philadelphia, Pa.

For Hon. Degree of Doctor of Medicine.—Drs. Peter Denny, Dutchess Co.; William Newman, New York.

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

Drs. E. M. Moore, Rochester; William Govan, Stony Brook; N. C. Husted, New York; E. C. Bottini, Lyons; C. R. Agnew, New York; H. B. Whiton, Troy; A. N. Bell, Brooklyn; William C. Wey, Elmira; John G. Orton, Binghamton; Henry W. Dean, Rochester; William S. Ely, Rochester; George H. Hubbard, Lansingburg; Joseph E. West, Utica; S. O. Vanderpoel, Quarantine; H. D. Didama, Syracuse; Frederick Hyde, Cortland Village; J. S. Prout, Brooklyn; M. H. Burton, Troy; James L. Little, New York; John G. Adams, New York; Elsworth Eliot, New York; J. C. Hutchinson, Brooklyn; James P. White, Buffalo; H. L. Chubbuck, Elmira; Levi Moore, Albany; B. F. Sherman, Ogdensburg; J. Foster Jenkins, Yonkers; Francis Burdick, Johnstown; R. V. K. Moulfert, Orange; E. Krackowizer, New York; E. R. Squibb, Brooklyn; George F. Shrady, New York; Thomas M. Flandreau, Utica; Israel Parsons, Marcellus.

Delegates to the Pennsylvania State Medical Society—Drs. Salvator Caro, New York; Levi Moore, Albany; Solomon Van Etten, Port Jervis.

Delegates to the Ohio State Medical Society—Drs. Thomas D. Strong, Westfield; William B. Sprague, Pavilion; Morgan Snyder, Port Plain.

Delegates to the Rhode Island State Medical Society—Drs. J. Marion Sims, New York; Thomas Addis Emmet, New York; D. P. Bissell, Utica.

For Delegates to the Maine State Medical Society—Drs. Hiram Corliss, Greenwich; Luther Guiteau, Trenton.

For Delegates to the Massachusetts State Medical Society—Drs. John G. Adams, New York; George H. Hubbard, Lansingburg; William H. Thayer, Brooklyn; E. H. Parker, Poughkeepsie; H. K. Bellows, Norwich; Jno. P. Gray, Utica.

For Delegates to the Connecticut State Medical Society—Drs. Gurdon Buck, New York; Seth Shove, Katonah; A. T. Douglas, Rondout; James W. Miner, Brooklyn; Eugene Beach, Gloversville; Jared Linsley, New York; Bradford S. Thompson, Salisbury, Conn.

For Delegates to the New Jersey State Medical Society—Drs. Robert Newman, New York; Solomon Van Etten, Port Jervis; J. G. Orton, Binghamton; J. V. Kendall, Baldwinsville; Morgan Snyder, Fort Plain.

For Delegates to the New Hampshire State Medical Society—Drs. J. H. Pooley, Yonkers; M. R. Holbrook, Poughkeepsie; Wm. M. Chamberlain, New York.

For Delegates to the Vermont State Medical Society—Drs. George H. Hubbard, Lansingburg; N. H. Ballou, Mechanicsville; J. H. Wheeler, Athens.

For Delegates to the Canadian Medical Association—Dr. Arthur S. Wolff, Plattsburg.

For Delegate to the Michigan State Medical Society—Dr. Chas. G. Bacon, Fulton.

FOR COMMITTEE UPON STATISTICS.

First District—Dr. Elsworth Eliot, New York; *Second District*—Dr. John Ordronaux, Brooklyn; *Third District*—Dr. Jos. Lewi, Albany; *Fourth District*—Dr. B. F. Sherman, Ogdensburg; *Fifth District*—Dr. Henry N. Porter, New York Mills; *Sixth District*—Dr. John G. Orton, Binghamton; *Seventh District*—Dr. H. D. Didama, Syracuse; *Eighth District*—Dr. Julius Miner, Buffalo.

FOR COMMITTEE UPON PRIZE ESSAYS.

Drs. Thomas F. Rochester, Buffalo; Henry W. Dean, Rochester; Julius F. Miner, Buffalo.

FOR COMMITTEE UPON PUBLICATION.

Drs. J. V. P. Quackenbush, Albany; Thos. Hun, Albany; Wm. H. Bailey, Albany.

FOR COMMITTEE UPON BY-LAWS.

Drs. Oliver White, New York; Thos. Hun, Albany; Wm. H. Bailey, Albany.

CENSOR OF SYRACUSE UNIVERSITY, MEDICAL DEPARTMENT.

Dr. Samuel G. Wolcott, Utica.

The following resolution, attached to the report, was also adopted:

Resolved, That as the sense of the Nominating Committee, that the President of the Society be requested to urge faithfulness on the part of the Committee on Statistics, for the purpose of eliciting the information contemplated in the constitution of said Committee.

C. R. AGNEW, *Chairman.*

WM. C. WEY, *Sec.*

DR. GOVAN offered the following resolution, which was unanimously adopted:

Resolved, That the thanks of the Society are hereby tendered to Dr. Swinburne, for the banquet furnished by him last evening.

DR. CORLISS bade the Society an affectionate farewell, not knowing but that it might be the last time he ever should meet with its members. Dr. Corliss is now 81 years of age, and is probably the oldest active member.

DR. QUACKENBUSH offered the following:

Resolved, That the thanks of the Society be presented to the President, Dr. Moore, for the prompt, impartial, and business-like manner with which he has performed the duties of presiding officer of this Society.

Unanimously adopted.

DR. MOORE responded, after which the Society adjourned.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from January 19, 1874, *to February* 4, 1874.

BAILY, Jos. C., Surgeon.—Granted leave of absence for two months. S. O. 15, A. G. O., January 26, 1874.

GIBSON, J. R., Assistant Surgeon.—Granted leave of absence for 40 days. S. O. 2, Division of the South, January 20, 1874.

BENTLEY, E., Assistant Surgeon.—Granted leave of absence for 30 days, with permission to apply to the Adjutant General of the army for an extension of 30 days. S. O. 11, Department of California, January 21, 1874.

TAYLOR, M. K., Assistant Surgeon.—Assigned to duty at Austin, Texas, S. O. 11, Department of Texas, January 19, 1874.

HEIZMANN, C. L., Assistant Surgeon.—Assigned to duty as Post Surgeon at Fort McPherson, Nebraska, S. O. 10, Department of the Platte, January 23, 1874.

WIRTZ, H. R., Surgeon.—Died at San Francisco, California, on January 24, 1874.

Medical Items and News.

COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.—The annual dinner of the Alumni Association of the College of Physicians and Surgeons will take place at Delmonico's, Fifth avenue and Fourteenth street, Monday evening, March 2, at 7 o'clock. Tickets, five dollars each, can be obtained of Mr. Clacher, Medical Library and Journal Association Rooms, 107 East 28th Street, New York. A general meeting of the Association for the election of officers will be held at the College, Wednesday evening, February 28.

THE SIAMESE TWINS are to be dissected at Philadelphia, under the auspices of the College of Physicians. We shall give a full account of the results in due time.

THE APPROPRIATION FOR THE ARMY MEDICAL MUSEUM, and the Library of the Surgeon General's office has been restored to its former amount. Let the profession congratulate itself that its wishes in this respect have been granted.

ON ANIMAL VACCINATION, BY FRANK P. FOSTER, M.D.—Dr. Foster wishes to make the following corrections to his remarks before the New York Academy of Medicine (vide page 22):

Page 22, vol. viii. 2d paragraph, 4th line: for "protection of vaccination," read "production of

vaccinia." 4th paragraph, 8th and 9th lines: for "Dr. Seguin, claiming to present the view taken of the subject," read "Dr. Seaton, founded on observation of the practice." 6th paragraph, 1st line: for "vaccina," read "vaccinia." 3d line: for "the protection," read "is that." 4th line: for "vaccination," read "vaccine," 7th paragraph, 1st line: omit "who introduced animal lymph." 8th paragraph, 4th line: omit "generally." 8th line: for "does," read "do." 9th paragraph, 1st line: omit "as." 2d line: for "equal," read "equally." 10th paragraph, 1st line: for "with," read "within." 2d line: omit "the animal," and, for "can be," read "has been." 3d and 4th lines: for "estimate with regard to its liability," read "elements in estimating its power."

DR. S. OAKLEY VANDERPOEL has been confirmed by the Senate as Health Officer of the Port of New York, for the next term. This is nothing more than could have been expected.

THE PHILADELPHIA OBSTETRICAL SOCIETY have elected the following corresponding members:—Drs. Fordyce Barker, T. G. Thomas, J. Marion Sims, T. A. Emmet, E. R. Peaslee, Nathan Bozeman, Isaac E. Taylor, Abraham Jacobi, of New York; J. V. P. Quackenbush, Albany; Charles Buckingham, Boston; Wm. H. Byford, Chicago; Theophilus Parvin, Indianapolis.

NEW YORK PATHOLOGICAL SOCIETY.—In our list of officers of this Society we accidentally omitted the name of Dr. J. C. Peters as editor of the Transactions.

THE MEDICAL VICTIMS OF YELLOW FEVER AT MEMPHIS.—We have received the following circular, which speaks for itself:—

"*To the Medical Profession at Large*: In obedience to the resolution of the Convention of Physicians, lately assembled in this city, we undertake this address to your sympathy, with full assurance that its hallowed object will secure your cordial support.

"But yesterday our community was as a house of mourning, and its wail of distress, arising from stricken hearts and desolate homes, smote the ear of the world with the horrors of our affliction. Those of our people who remained in the doomed city can alone appreciate the sad story of suffering seen and felt in our midst, when death thus held, for seven long weeks, its high carnival among us. Over the entire city death and silence brooded. Its deserted streets, alike both day and night, scarce echoed a sound save the mournful hearse-rattle as it hurried to the grave its load of dead, or the foot-falls of those ministers of mercy who lighted up the hours of darkness with their visits of charity. Silently and continually the pious labor of love was performed, and each rivalled the other in the patient discharge of a common humanity. When the shaft of death prostrated one, another, with true Corsican spirit, took his place, and the work of benevolence went fearlessly on, until, under the favor of Heaven, the disease was baffled and the reign of terror at an end. Each creed, sect, order, and brotherhood had its heroes and its martyrs, and it is in commemoration of the deeds of both the living and the dead that our hearts should never suffer forgetfulness.

"The faithful physician who survived the storm bears in his conscience its plaudits of duty done; but our seven brothers, Williams, Freeman, Crone, Hatch, Kennon, Blount, and Minor, fallen at their post, martyrs to the cause of humanity; ay, bright exemplars of professional honor and duty, sleep in their quiet graves, with more lasting glory than embalmed warriors in piles of storied marble. Our fallen brothers, if they could be consulted, would doubtless wish no fitter burial than quiet interment in leafy Elmwood; but professional pride demands the honor of their perpetual commemoration, and we ask in this behalf that suitable stone be raised and carved for them. Their fame, the story of their heroism, belongs to the medical world, and our brethren throughout the broad land are respectfully requested to contribute something to this laudable end. Your contributions, however small, will aggregate a success of the enterprise.

"Remittances may be made to either member of the Committee—Richard H. Taylor, M.D., 44 North Court St.; F. L. Sim, M.D., 115½ Beale St.; R. W. Mitchell, MD., 275 Main St.

"MEMPHIS, TENN., *November* 10, 1873."

THE METROPOLITAN THROAT HOSPITAL.—This Hospital, located at No. 17 Stuyvesant Street, near Cooper Institute, has recently been organized and incorporated with the following medical staff:—*Physicians*—Clinton Wagner, M.D., Morris J. Asch, M.D., Geo. M. Lefferts, M.D. *Pathologist*—Edward B. Bronson, M.D. *Consulting Physicians and Surgeons*—J. J. Crane, M.D., W. A. Hammond, M.D., J. Marion Sims, M.D., J. R. Wood, M.D., Max Herzog, M.D. *Medical Superintendent*—Clinton Wagner, M.D. Dispensary department open daily from 2 to 4 P.M. Laryngoscopic demonstrations given daily, to which members of the profession are cordialy invited.

New Publications.

BOOKS RECEIVED.

CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, UNITED STATES ARMY, in 3 vols. By JOHN S. BILLINGS, Ass't Surg. U. S. Army. Washington, D. C. 1874.

UNIVERSAL FORMULARY; CONTAINING THE METHODS OF PREPARING AND ADMINISTERING OFFICINAL AND OTHER MEDICINES, etc., etc. R. EGLESFIELD GRIFFITH, M.D. Third edition. JOHN M. MAISCH, Ph.D. Philadelphia: H. C. Lee. 1874.

ELECTRO-CAUTERY IN UTERINE SURGERY. By J. BYRNE, M.D., M.R.C.S.E. New York: W. WOOD & Co. 1874.

SCHEM'S STATISTICS OF THE WORLD, etc., etc. By PROF. ALEX. J. SCHEM. Semi-annual publication, Nov. 1873. Moulton, New York; Trübner & Co., London.

THE STUDENT'S GUIDE TO SURGICAL ANATOMY, being a Description of the most Important Surgical Regions of the Human Body, etc. By EDWARD BELLAMY, F.R.C.S. Philadelphia: H. C. Lea. 1874.

MEDICAL AND SURGICAL DISEASES OF WOMEN. By ROBERT BARNES, M.D., London, etc., etc. Philadelphia: H. C. Lea. 1874.

AN INTRODUCTION TO PHYSICAL MEASUREMENTS, etc. By DR. F. KOHLRAUSCH. Translated from second German edition, by T. H. WALLER, B.A., B.Sc., and H. R. PROCTOR, F.C.S. New York: D. Appleton & Co. 1874.

THE PUERPERAL DISEASES. Clinical Lectures delivered at Bellevue Hospital. By FORDYCE BARKER, M.D., Clinical Prof. of Midwifery and the Diseases of Women in the Bellevue Hospital Medical College, etc., etc. New York: D. Appleton & Co. 1874.

ON THE GOVERNMENT OF THE RETREAT FOR THE INSANE AT HARTFORD, CONN. Hartford, Conn. 1874.

THE NATURE OF GUNSHOT WOUNDS OF THE ABDOMEN AND THEIR TREATMENT, etc. By EUGENE PEUGNET, M.D., Surgeon to North-western Dispensary, etc. New York: W. Wood & Co. 1874.

A PRACTICAL TREATISE ON DISEASES OF CHILDREN. By J. FORSYTH MEIGS, M.D., Phys. Penn. Hospital, and WILLIAM PEPPER, M.D., Lect. Clin. Med., Univ. Penn. Fifth edition. Revised and enlarged. Philadelphia: Lindsay & Blakiston. 1874.

Medical Department of Life Insurance.

An Inquiry into the Mortality of Eight Hundred Policy-holders, who were supposed, at the Time the Policies were Issued, to have a Predisposition to Consumption, either Inherited or Acquired.*

By ALBERT H. BUCK, M.D.,

Instructor in Otology in the College of Physicians and Surgeons, New York.

(Continued from the January 15th No. of the Record.)

The 800 cases, upon which the following calculations are based, represent very nearly the total number of risks of this kind which the company has upon its books for the city of New York and vicinity, prior to 1872. About 700 of the number were examined by the former medical director of the company, Dr. Clements, and the balance by the physicians mentioned in the early part of this report and by myself. To facilitate the arrangement into groups or classes, all the facts of importance, either in an actuarial or a medical point of view, were written upon a separate card for each case. The groups into which the entire number were divided are the following:

1. Those who had previously had spitting of blood. 70 cases.
2. Those who had previously lost a parent from consumption. 386 cases.
3. Those who had previously lost one or more brothers or sisters from consumption. 229 cases.
4. Those who had previously lost a parent and one or more brothers or sisters from consumption. 107 cases.
5. Those who had previously lost both parents from consumption. 8 cases.

GROUP I.

Spitting of Blood.

The facts relating to this group are briefly the following: In the first place, if a proper proportion between height and weight is any indication of a good physique, the 52 cases in which these items have been recorded must have been well selected. The averages are as follows: (See Table XVII.)

In the second place, it appears that there were only two cases where the insured had spitting of blood more than once. In eight instances no record seems to have been kept of the time that had elapsed since the last attack. In the remaining 62 cases the lengths of time were recorded, and may be classified as follows: (See Table XVIII.)

Of these cases 59 were apparently free from any hereditary taint to complicate the problem. The deaths in the entire group were 11 in number: one from dysentery, one from softening of the brain, one from intemperance, and eight from consumption (nearly 73 per cent.). There were 8 deaths among the 59 non-hereditary cases, or 1 to 7⅜ persons; while among the 11 cases, complicated by an hereditary taint, there were 3 deaths, or one to 3⅔ persons. The average age at which the 70 were insured is 36¼ years; the average age of the eleven at death is 43¾ years.

GROUP II.

One Parent Consumptive.

The average age at which these 386 cases were insured is 33 years, while the average age at which the parents died of consumption is 42 years. Or, if we make two subordinate groups, one of 161 cases in which the consumptive taint came through the father, and the other of 225 cases in which it came through the mother, we shall find that in both groups the applicants averaged 33 years of age, but that in the former the fathers averaged 45 years at death, while in the latter the mothers averaged only 40 years.

Again, the relations of height to weight, in 320 individuals of the groups, are as follows: (See Table XIX.)

The deaths in this group are 22 in number: 8 from consumption, (36⅓ per cent.), 6 from brain troubles (27⅓ per cent.), one from inflammation of the bowels, one from cancer of the face, one from cancer of the bowels, one from abscess of the liver, one from dysentery, one from typhoid fever, one from fatty degeneration of the heart, and one from congestive malarial fever. Or, making the same division as before into two subordinate groups, we obtain the following results:

Hereditary by the mother, 225 policies. 15 deaths.
Hereditary by the father, 161 policies. 7 deaths.

GROUP III.

One or more Brothers or Sisters Consumptive.

This group comprises 229 cases. The average age of the applicants at the time they became insured is 36 years; the average age of 285 brothers and sisters, alleged by them to have died of consumption, is 36 years. The relations of height to weight are as follows: (See Table XX.)

The deaths in this group are 12 in number; namely,

TABLE XVII.—Spitting of Blood.

Relations of Height to Weight. 53 Cases.

Height	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	5.10	5.11	6.00
Weight	125	...	...	159	...	141	139	151	159	165	173	160
American Standard	120	...	...	135	...	143	145	148	155	160	165	170

TABLE XVIII.—Spitting of Blood.

Length of time since the occurrence.

Length of Time	1 year.	2 yrs.	2–5 yrs.	5–10 yrs.	10–15 yrs.	15–20 yrs.	20–25 yrs.	25–30 yrs.	30–40 yrs.	Not stated.	Sever'l times.
A.—No of Cases	2	2	4	19	10	5	6	2	1	6	2
B.—No of Cases	1	1	..	3	4	..	..	..	..	2	..
Total No. of Cases	3	3	4	22	14	5	6	2	1	8	2

A. Those whose policies have never become claims. B. The deaths.

* Spitting of blood is alone referred to.

TABLE XIX.—ONE PARENT CONSUMPTIVE.

Relations of Height to Weight. 320 cases.

Height	4 ft. 11 in.	5 ft.	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	5.10	5.11	6 ft.	6 ft. 1	6.2
Average Weight.	117	109	115	107	117	130	134	134	141	152	155	154	171	158	170	173
American Standard	.....	.....	120	125	130	135	140	143	145	148	155	160	165	170	.....	...

TABLE XX.—ONE OR MORE BROTHERS OR SISTERS CONSUMPTIVE.

Relations of Height to Weight. 181 cases.

Height	5 ft. 2 in.	5.3	5.4	5.5	5.6	5.7	5.8	5.9	5.10	5.11	6 ft.	6.1	6.2
Average Weight	130	150	132	134	145	143	148	147	155	161	173	156	190
American Standard	125	130	135	140	143	145	148	155	160	165	170	....	....

TABLE XXI.—ONE PARENT AND ONE OR MORE CHILDREN CONSUMPTIVE.

Relations of Height to Weight. 85 cases.

Height	5 ft. 2 in.	5.3	5.4	5.5	5.6	5.7	5.8	5.9	5.10	5.11	6 ft.	6.1	6.2
Average Weight	119	125	131	140	141	146	159	153	167	160	191	....	181
American Standard	125	130	135	140	143	145	148	155	160	165	170	....	....

4 from consumption (33⅓ per cent.), 3 from disease of the brain (25 per cent.), 2 from accidental causes, 1 from "dropsy," 1 from chronic inflammation of the bladder, and 1 from cirrhosis of the liver.

GROUP IV.

A Parent and one or more Brothers or Sisters Consumptive.

The 107 applicants of this group were 35 years of age, on an average, at the time their policies were issued by the company. The average age at which the parents died is 47 years. The relative heights and weights are as follows: (See Table XXI.)

The deaths which occurred in this group are 15 in number: 10 among the 67 who received the consumptive taint through the mother, and 5 among the 40 who received it through the father. The causes of death are the following:

Six, or 40 per cent., died from consumption: three, or 20 per cent., died from brain troubles; two from typhoid fever; one from Bright's disease of the kidneys; one from abscess of the liver; one from accidental and one from unknown causes.

GROUP V.

Both Parents Consumptive.

The eight applicants of this group were, on an average, 35 years of age at the time they became insured, while their parents at death averaged 52 years of age. They were all of good proportionate weight. The only death that occurred in the group was due to consumption.

CONCLUSIONS.

Thus far I have simply endeavored to present, in a condensed form, as many of the facts as I was able to gather concerning the physical condition, family history, and death-record of the 800 individuals involved in the present inquiry. The great practical question, however, is: Has it paid to insure these more or less imperfect lives? If it has not, why should we continue to lose money on this class of cases? If it has, then will it be well worth our while to define the conditions or laws in accordance with which success has been obtained; and this our analysis will, to a certain extent, enable us to do.

Through the kindness of the actuary, Mr. William D. Whiting, I am enabled to furnish you with the answer to this most important question. It is embodied in the following communication:

December 23, 1873.

SIR: I have carefully examined the cards, containing the names of parties insured in this company whose family history, as taken from the applications, shows a taint of consumption, handed me by yourself. I have

eliminated therefrom all duplicate risks, when more than one policy has been issued upon the same life, thereby increasing the reliability of the results notwithstanding the smaller basis for calculation obtained.

The results, grouped as requested, are as follows, compared with the expected mortality according to the actuaries' or 17 office-experience tables.

TABLE I.

	No. of Pols.	Exposure.	Table mort.	Actual mort.	Ratio of actual to expected mort.
One Parent.....	386	2864½	35.52	22	61.93
One or more Bros. & Sisters.....	229	1807½	21.82	12	55.00
One Parent & one or more Bros. & Sists.	107	768½	9.35	15	160.42
Both Parents.....	8	63	.75	1	133.33
Insured spat blood..	70	495½	6.16	11	178.57
Totals.....	800	5999	73.60	61	82.88

In order to show the relative mortality, where there is but one member of the family dying by consumption, and where there is more than one member, free from the confusion of minuter classifications, I have arranged the same risks in the following order:

TABLE II.

	No. of Pols.	Exposure.	Table mort.	Actual mort.	Ratio of actual to expected mort.
One person in family	553	4075½	40.89	33	66.14
More than one person in family....	177	1428½	17.55	17	96.86
Insured spat blood..	70	495½	6.16	11	178.57
Totals.....	800	5999	73.60	61	82.88

No one of these "spitting blood" is included in any other group, as these cases were selected for the purpose of showing this important item separately without regard to family history. The enormous mortality shown, I believe for the first time, will of itself fully justify the extra labor.

I have also made a subdivision of the 1st and 3d groups for the purpose of elucidating the relative mortality when the father was the party dying of consumption as contradistinguished from the mother dying of the same disease, as suggested by you. The results, as à priorily expected, are as follows:

TABLE III.

	No. of Pols.	Exposure.	Table mort.	Actual mort.	Ratio to table.
Father died of cons'n	161	1220ys	14.86	7	47.11
Mother " "	225	1644½	20.66	15	72.60
F. and one or more Bros. and Sisters.	40	326	3.74	5	133.69
M. and one or more Bros. and Sisters.	67	442½	5.61	10	178.24

Or, consolidating the same without regard to brothers and sisters into only two groups, we have:

TABLE IV.

	No. of Pols.	Exposure.	Table mort.	Actual mort.	Ratio to table.
Father dying with consumption.....	201	1546	18.60	12	64.51
Mother dying with consumption.....	292	2086½	26.27	25	95.16

In conclusion, I would say that the most valuable results of the above, in a mathematical point of view, are those in Tables II. and IV., on account of the number of policies involved securing greater uniformity in the law of averages. For the same reason groups Nos. 4 and 5 of Table I. should be taken with much caution, especially group 4, consisting of but 8 persons, and having no value except to show that *as far as it goes* it is in the direction which would be surmised à priori. I am very much pleased to find that taking these risks as a whole, the mortality has been very favorable to the company, quite as much so as the whole number of risks at large taken by the company since its organization—which fact reflects great credit upon the discrimination of those who made the medical examinations.

Yours truly,

WM. D. WHITING,
Actuary.

From these calculations, therefore, it would seem that the excessive mortality of three of the groups (spitting of blood, both parents, and one parent together with one or more children), comprising 185 cases, is more than counterbalanced by the small mortality of the other two, which comprise in all 615 cases. It would perhaps be rash to draw the inference that cases belonging to the three groups in which the mortality has proved excessive, should not be admitted to the privileges of life insurance, but we can scarcely go amiss in rejecting hereafter all cases of "spitting of blood," no matter how long the time that may have elapsed since the occurrence of this symptom. As to the group of two consumptive parents, if we hereafter admit cases belonging to it, the applicants should be not less than 45 years of age.

In the group of one consumptive parent together with one or more consumptive brothers or sisters, the average age of the applicants is 35 years, which would imply that a fair proportion of the number were still younger; in point of fact 60 of this group were 30 years of age or younger. It would probably not be too severe a rule to accept applicants of this class only on condition that they have attained their 35th year, and that the consumptive brothers or sisters had died at a still earlier age. Otherwise the risk should be postponed until he shall have attained the age at which the brothers or sisters died of consumption. In doubtful cases some weight may be attached to the fact that the mortality is greater among those who receive the consumptive taint through the mother than among those who receive it through the father.

We cannot wonder at the low mortality in the group of one or more consumptive brothers or sisters, when we observe what care has been taken to insure only those who had passed or at least attained the ages of their deceased brothers or sisters.

As regards the group of a single consumptive parent, the results attained are so astonishingly favorable that I am afraid to recommend a course in har-

mony with the logical deductions one would naturally make. Until these results have been corroborated by future investigations, it would appear wiser to follow the rule that, where one parent has died of consumption, the applicant should be at least 30 years of age.

The mortality from consumption among these five groups bears a direct ratio to the degree of inherited taint, as will be seen in the following summary:

3d group.	One or more brothers or sisters	33½	per cent.
2d "	One parent	26⅔	" "
4th "	One parent and one or more brothers or sisters	40	" "
1st "	Spitting of blood	73	" "
5th "	Two parents	100	" "

As regards the physical condition of those applying for insurance, our statistics justify us only in speaking of the relations of height to weight. (It is, of course, taken for granted that we are dealing only with individuals who in all other respects appear to be healthy.) In cases, therefore, where the hereditary taint alone seems scarcely a sufficient reason for declining the risk, the fact of his being below the standard weight should render us cautious in recommending him.

THE LAW OF LONGEVITY,

WITH SPECIAL REFERENCE TO LIFE INSURANCE.

By NATHAN ALLEN, M.D., LL.D.,

LOWELL, MASS.

(Read before the American Public Health Association, Nov. 11, 1873.)*

The subject of longevity has always attracted much attention. The art and means of prolonging life were frequently made the themes of discussion, long before the real structure and functions of the most important organs in the human body were discovered. But as the principles of physiology have of late years become better understood, new interest has sprung up in relation to all matters pertaining to health, and the inquiry is very generally raised at the present time, what are the best means of preserving life, and thus securing that great boon, longevity? Now, may there not be a great general principle or law, grounded in physiology, which may serve as a guide in these matters, and help to illustrate and explain all minor facts or secondary considerations? Is there not some standard or model established by nature herself, to which we may always appeal, and by which all doubtful questions here may be tested? From our knowledge of the laws of nature, as well as of the principles of science generally, we should naturally infer that there must be found in physiology some such general law, or such standard. Several years since, after somewhat extended observation, and no small amount of reflection and reading, I became convinced that there existed a great general law of population, or increase, as a fundamental principle in physiology, and that this same law of propagation (subject to certain conditions) extended throughout the whole animal and vegetable kingdoms. If such a law in nature does exist, it might be inferred that it would have some connection with the greatest amount of health and longevity.

Law of Propagation.—This law may be briefly defined thus: it is based upon a perfect standard of organization, or consists in the perfectionism of structure; or, in other words, that every organ in the human body should be perfect in structure, and that each should perform its legitimate functions in harmony with others. Taking this, then, as a standard, we have a great law or principle pervading all organic matter, that furnishes a guide by which all deviations from this model, and the manifold changes that follow, may be explained and understood. While this law is subject to certain conditions, as food, climate, exercise, etc., all these act as secondary agents or factors. They may modify the operation of the law, but cannot change its nature or general character.

Evidences in proof of such a law may be deduced from physiology itself, from pathology, from the laws of hereditary descent, from the effects of intermarriage of relations, from facts gathered in the history of different families, and changes in numbers, as applied to distinct classes, races, and nations. But without dwelling upon these points, we maintain that the organization upon which this law of propagation is based, presents also the only true standard in physiology for the greatest amount of longevity—of health—of physical strength and happiness, as well as of beauty in form and outline.

Law of Longevity.—But it is proposed to consider here only the application of this law to longevity. By this term is meant long life—the greatest duration of human life, whether in isolated cases or in large numbers. Where, then, are these cases found—what is their character—and what are the facts attending them?

In the first place, it is very evident that long life is not dependent alone upon food, nor upon climate, nor upon exercise; neither is it found in any one locality, nor with any one people, nor in any particular station; neither where great riches nor excessive poverty abound. It is sometimes found in the city, but more generally in the country.

All must admit that some of these conditions are very important, and that good health and long life must depend greatly upon the manner in which the relations between the various parts of the system and these external agents are carried on. But after all, may there not exist a general law in the body itself upon which these depend? If we had perfect standards of organization around us upon which this law is based, its truth would be more easily demonstrated; but instead of such, we have only approximations, and these in almost endless variety and form. In order that we may have a clearer and more definite understanding of the foundation of this law, let us carefully examine its physiological conditions. Every animal organization is complex—is composed of many distinct organs. Each organ has a specific work to do, and in its normal state must do so much and no more. Now in the healthiest and most perfectly organized structure, all these separate organs are found not only in a perfectly healthy condition—each one performing its own normal functions—but well balanced and working harmoniously together. In this state "the wear and tear," or the demands which nature makes to support life and carry on its operations, come upon all these organs alike, each according to its own nature, without infringing upon that of any other.

The Human Body compared to a Machine.—In the promotion of health and longevity, too much stress cannot be attached to the importance of preserving this harmony or balance of organization. In some respects, the human body may be compared to a perfect machine, made up of many complicated parts. How different the working or running of such a machine from that of one imperfectly constructed and unequally balanced in all its parts! The one seldom needs repairs, the other frequently. The one will last, as it were, for an age; the other becomes almost useless in a short time.

* Reprinted from the *Sanitarian* for February, 1874.

It is so in reference to the human system. Whenever a certain organ or class of organs becomes relatively too large or too small, causing a want of balance or harmony in their action, there must be, in the very nature of the case, far greater liability to disease. Accordingly, it is in persons possessing this imperfect, ill-balanced organization, that we find not only the greatest amount of sickness, but that which is most obstinate and fatal. How often it happens that some slight derangement or trifling weakness operates as the entering wedge to the most serious diseases! It is the weak spot caused by inheritance, or developed by exposure, where disease finds its germ or starting-point, though all other parts of the system are in a perfectly sound condition; and not unfrequently life is terminated by a single organ, or even some part of it giving out, when all the other organs might have performed their healthy functions for many years.

We dwell upon the importance of this harmony or balance of action in the vital forces, for it is the great secret of good health and long life. It is a cardinal point in the law of longevity, as will appear from a more full sketch of its foundation.

Perfect Structure and Harmony of Function.—It is upon this perfect structure or anatomy of the body, combined with the normal action of all its physiological functions, upon which we base this law of longevity. It is true we have no such perfect standards or models of human organization now existing, but only approximations towards them. Still the law may apply to such as we have, just as well as the general law of gravitation or attraction to the smallest-sized bodies. We can readily conceive of such standards, and how the same law that governs them may be applicable to their representatives of whatever grade or character.

All the pains, the weaknesses, and the diseases of the human body, are but the result of deviations from this normal state; and all the means and agencies employed for the preservation of health and life look towards restoring this standard. It is well known that there are influences constantly operating to produce changes both in the structure and functions of the system. Some of these agencies have their origin internally; some act entirely external to the body, and others operate by what are called laws of heredity. By some of these influences the physical system is improved and perfected, but by others the deviations from a healthy standard are increased more and more. Probably the most powerful of these forces is that of inheritance. This agency constitutes a very important element in the law of longevity. All writers upon this subject place this condition as first and foremost—that one of the almost indispensable requisites for long life is good healthy stock, or long-lived ancestry. For it has been found by universal observation and experience, that the representatives of such stock live the longest, and that very seldom, if ever, are found persons of great age originating from feeble and short-lived ancestry.

Law of Inheritance.—Now what is the secret of this transmitted power that conduces so much to longevity? May there not be some general principle or law involved in these changes from hereditary influences, which may aid us in explaining the why and the wherefore? We know well the effects of such power, but what is the explanation—what is the philosophy involved? Under the law in nature that "like begets like," and that when the producing forces are sound and healthy, it is found that their offspring will partake of the same character, and that under favorable circumstances this may be continued for several generations. Sometimes there is an improvement in the stock; but not unfrequently a deterioration, especially after three or four generations.

Now what is the peculiarity or type of organization here perpetuated? What are its elements or constituents? What makes it long-lived? Do we not find that it consists in a sound, healthy structure of every part of the body, and that there is a remarkable balance in all the organs and harmony of functions? We venture the assertion that such will be found the character of this organization in every instance, and that there are no exceptions to the rule. Does not this, then, afford evidence that there is a general law in nature conducive to longevity, and that this law is based upon that organization which is most perfect, and all of whose functions act most harmoniously? Let us apply the rule to such individuals and families reaching a great age, that have come under our own observation. For many years I have verified the fact in numerous cases, and have never found an exception.

There is another point of view whereby this law may be tested. Certain physiological conditions have been laid down by some writers as sure indications of longevity. These conditions embrace the healthy performance of the functions of all the leading organs of the body, and may be summed up under these heads: Respiration, Digestion, Circulation, Assimilation, and Secretion. Where all the vital forces connected with each of these departments of physiology are found to operate regularly and vigorously, they are thought to be the sure indications and precursors of longevity. Now what does this imply but soundness of structure and harmony of function? Let any one of these fail in the least of performing its part, and all suffer. Does not this view of longevity, then, furnish strong evidence in favor of the law which has been set forth in this paper?

Signs of Longevity.—There is another class of facts which has an important bearing upon this question. These are what are denominated the physical signs of longevity. There must be a symmetrical development of the whole body. The head must not be too large or too small. The neck must not be too long or too slender. The chest must be well developed, but the abdomen must not be too large. The whole body must be well proportioned, not too tall nor too short. No class of organs must be too predominant; or, in other words, the Temperaments must be properly mixed or blended, especially the Nervous and the Sanguine, possessing more of the vital organs, must not be very conspicuous. There are some minor signs, such as the voice, the teeth, the color of the eyes and the skin, the quality of organization, etc.; but when we sum up all the foregoing signs, do they not clearly point to a harmony or balance of all the organs of the body, and thus confirm the truth of the law of longevity as here advocated?

There is a large body of facts also connected with the cure and prevention of disease, that has a direct bearing upon this subject. All sound medical treatment and means for the promotion of health operate in harmony with this great law of longevity. They aim to restore the normal structure and healthy functions of every part of the body.

In all works treating of longevity great stress is laid upon the influence of climate, food, air, water, exercise, etc. Statistics show that, while the extremes of either heat or cold are not conducive to long life, a moderate climate in countries where the changes of temperature are neither too great nor too sudden, is decidedly favorable. But even here there must be a strict observance of hygienic laws. In relation to the

right kinds of food and drink, pure air, healthy localities, dwellings, employments, etc., however important, they are all secondary agencies, and operate under and in harmony with one great general law.

Mental Hygiene.—But there is still another class of facts differing from any of those mentioned, that has a powerful influence upon longevity, viz., the influence of mind upon the body. Mental training, a well-balanced mind, a cheerful, contented disposition, and temperate habits, are, with rare exceptions, found indispensable. Now these presuppose a harmonious development of the whole body, and particularly of all parts of the brain. For it is impossible, we believe, to obtain the qualities here mentioned in a high degree without these two conditions. And the nearer this development approaches that standard of organization upon which is based the great law of longevity, the greater will be not only the aggregate amount of health, but the longer the duration of human life. This statement will be found abundantly verified in the history and character of persons who have reached a great age.

This interdependence of body and mind is becoming every year better and better understood. It is found that the relations of the mind to the body, and of the various states and changes of physical organization to the mind, have a powerful influence upon health. And the more marked and abnormal the differences in this relation, the more striking are the effects. If, then, health is so dependent upon the state and relation of these two agents, the duration of human life must be most sensibly affected by it. And we venture the assertion, that the more thoroughly this particular feature of the subject is investigated, the more important and far-reaching will be found the influence of these reciprocal relations. The evidences derived from this source will go far, we believe, towards proving that nature has established a certain harmony or equilibrium of action between the body and the mind, and the more perfect that development and harmonious the performance of their respective functions, the nearer is the approach to that standard of organization upon which is based the law of longevity.

This view explains, in part, why the average age of man has been increased by education, and that the greatest longevity is found among nations most highly civilized. In confirmation of this remark, a distinguished writer says: "That type of civilization in which the efficiency of the community and of the individual is greatest, in which there is the most harmonious action between the body and the mind, the greatest happiness of the greatest number, the least excessive expenditure with the least luxury, where regularity and temperateness are innate characteristics, will be that state of civilization most favorable to longevity." It is scarcely necessary to say that such a type of civilization could not exist without well-developed physical organizations generally, and a harmonious action of all the mental faculties.

Another well-known writer on this subject, after enumerating among the prerequisites to longevity, temperate and regular habits, a cheerful and contented disposition, says there must be not only an equilibrium of the mental faculties, but a descent from long-lived ancestors, a tranquil and happy temperament, and general symmetry of physical conformation, and harmonious proportions of all the different parts and organs of the body.

Numerous quotations might be cited from other authors, and many additional facts might be gathered from various sources in support of this theory of longevity; but our present limits will not permit. Perhaps the theory of one writer should not be passed by unnoticed, inasmuch as it may be thought to have some resemblance to the one here presented.

Theory of M. Flourens.—M. Flourens, in a very elaborate treatise, maintained that man ought by virtue of his natural constitution to live a hundred years, and that this natural term of life is abridged only by his own improvidence, follies, and excesses. The length of human life he attempts to establish by the law of growth and by analogy, viz., that every animal will live, on an average, five times the period of his growth. Thus, as it is found by anatomy that it takes, on an average, twenty years for man to reach his perfect growth, especially the bony structure, the limit of life would be one hundred years. Flourens held that neither climate, nor food, nor race, nor any external condition had much to do with the duration of life, but this depended almost wholly upon the natural constitution, and the intrinsic vigor of all the organs of the body. But he does not define very clearly how this natural constitution is based upon the anatomy and physiology of the system, nor attempt to show what are its laws and relations to the external world. We all know that climate, food, and other external agents have a powerful influence upon the development and preservation of the body. One great defect in his theory is, that he does not point out distinctly the great laws of health and life as based on physiology and external nature, which extend not only through individual existence, but are universal throughout creation. As to the question, what is the natural period of human life, provided all the conditions are favorable, perhaps he is not so much out of the way, though the testimony of most writers would place the limit somewhat less. Flourens presents us no standard of organization as a perfect model of imitation, and upon which the great laws of health and life must be based. If we take into consideration the structure and functions of the human body—the design of its existence, and its adaptation to external objects—there must be certain relations and fixed laws that govern in all these matters. For illustration, there is a fixed law that exists in the relation of pure air to the healthy functions of the lungs. It is so in reference to all other parts of the body. Now it is in the summing up of all these laws as applied to a perfect organization that we find the law of longevity. All the great laws of nature that are fixed and universal are invariably found based upon her works in a normal state, or in their most perfect development. As in painting and statuary the artist has constantly in his mind an ideal model, a typical standard which no living beings have ever reached but only made approximations to, so in physiology it is easy to conceive of a standard which represents an organization in its highest state of development. It was with reference to the making up and arranging the constituent elements which enter into such a standard that led the most profound physiologist in our country, Prof. Draper, to make this remarkable statement: "The approach to precision in these hypothetical constants will in all times be a measure of the exactness of physiology, and, it may be added, also of the practice of medicine. The time is at hand when such a typical standard must be the starting-point for pathology; and no rational practice can exist without it. The passage of physiology from a speculative to a positive science, is the signal for a revolution in the practice of medicine."

Advantages of the Law of Longevity.—The question may very properly be asked, Supposing there is such a law of longevity, what are its advantages? We answer, many and great. It is not a mere specu-

lative theory or vague hypothesis that cannot be comprehended or applied to any practical purpose. It harmonizes not only with all the well-known truths of physiology and pathology, but is sustained by all the agencies employed by nature or art for the protection and preservation of life. In fact, it is that great general law established by the Creator himself for perfecting and prolonging the life of every human being, of which all minor laws are a part and parcel. It holds up before us that perfect form and image in which man was created, and presents an embodiment of those laws and conditions with which we must comply in order to secure the greatest amount of happiness and the longest duration of life. With such a standard constantly before us, shall we not make greater efforts to conform to it than if we had no such conception? Besides, by means of understanding the various deviations from this perfect standard, we obtain a better knowledge of the infirmities, the liabilities, and the weaknesses of the human system. It presents a new stand-point from which to survey the causes of disease, as well as the agencies employed for its cure and prevention. It gives us a clearer and better understanding of the principles of hygiene and sanitary law, and enjoins the absolute necessity of observing them, if good health and long life are to be secured. It shows that all the changes which occur in the human system are subject to law; that disease, of whatever type and character, or wherever found, is a violation of law; and all treatment and remedies, whether provided by nature or art, must be viewed as agents or means to repair the injury.

Applied to Life Insurance.—But there is one use to which this law may be applied of incalculable value. We refer to Life Insurance. This is becoming an immense business, scarcely surpassed in interest and magnitude by that of any other in the country. From the best sources of information, it is estimated that there are over five hundred thousand, or half a million of lives insured in over two hundred different companies, and the amounts invested and at risk would startle one not accustomed to figures. The largest proportion of this business has sprung up within twenty or thirty years; and what is singular, the larger the business and the wider its expansion, the greater the changes in its management, and the more uncertain are its results. We should naturally suppose that time and experience would give permanence and stability; but what a sad spectacle is presented by the rise and fall of so many Life-Insurance Companies as have occurred—some of them, too, after many years apparently of successful experience! What a history of wrecks, losses, and disappointments does it exhibit! Scarcely can a parallel be found in the history of any other incorporated business in the country.

Commencing more than thirty years ago as an examiner for Life Insurance, appointed by the London Loan Office, and having since been connected as an examiner with several other companies, I have become more and more convinced that there was here room for great reform. But there are some questions on this subject of great interest, which we cannot discuss, but which, under other circumstances, might claim attention; our present object is simply to show wherein this law of longevity may be applied with great success to Life Insurance.

In the examination of any organic structure with reference to forming an estimate of its continuance, we must understand correctly its nature and construction, as well as the laws that govern its action. If it is made up of many parts or distinct organs, we must comprehend fully their relations to each other and to external objects. But in order to make the best use of such knowledge, and form an intelligent estimate of results, we want some general law or standard of appeal, which shall be applicable to the whole. To any one acquainted with the earlier history of the different sciences, it is well known what great advantage was found when a large body of facts or amount of knowledge had been obtained, that by the discovery of a general principle all these facts and this knowledge could be more systematically arranged and satisfactorily explained. It is somewhat so in applying this law of longevity to Life Insurance, though it may be subject to many conditions, and cannot be reduced to mathematical accuracy.

Prerequisites of Longevity.—Without explaining again this law and its conditions, let us briefly notice some of its applications in determining the prospect or continuance of life. All the essential elements or prerequisites for longevity may be conveniently arranged or summed up under three distinct heads, viz., *constitution*, *inheritance*, and *obedience to law*.

1st. It furnishes the examiner for Life Insurance with a standard of organization, with which the constitution of all persons examined may be compared, and which will assist in forming a correct judgment of their soundness, or in detecting the physical deviations from a normal standard; then what are the liabilities to disease, and what the prospects or probabilities of life. Without such a standard or guide we have no general rule to test the soundness or strength of the constitution. It must depend very much upon opinion merely, which, of course, will vary according to the differences of judgment in different individuals. With such a model constantly before us as nature has furnished, we can understand more exactly and fully the relations which all parts or organs of the body sustain, one to another, as well as to external nature; and then we can calculate or forecast far better the changes to which they may be subjected. The more of such knowledge we possess, the more accurately can we estimate the continuance or prospect of life.

2d. Long-lived Ancestry.—All writers upon Life Insurance lay great stress upon inheritance, or a long-lived ancestry. This has been found by universal experience to be one of the prerequisites, in fact an indispensable condition, of long life. Now, why—why is this so important? What are the reasons—what does it mean? What is the rationale of it, or what lessons does it teach? Does it not clearly and distinctly imply, that if there is any truth in this power of inherited organization for long life—the more perfect the organization the greater the power—there must certainly be found, somewhere in nature, a great general law of longevity? The influences of hereditary descent have as yet received but little attention, compared with their importance, even by the medical profession, and before they can ever be thoroughly understood, it will be found, if we mistake not, that there exists in physiology, as a fundamental principle, a general law of propagation, and as a part and parcel of the same, will also be found this law of longevity. In the matter of Life Insurance, a thorough knowledge of these hereditary influences is of the utmost importance.

3d. Conditions of Health.—Obedience to law. This has a very wide application, including all the physical laws, and relations of body and mind. The better these laws and relations are understood, and the more strictly all are observed, the greater will be the amount of health, and the longer human life. But in order to effect this most successfully, the conditions of good health must first be fully understood, such as

pure air and water, wholesome diet and drink, healthy vocation and residence, regular hours of exercise and sleep, temperate habits, right mental and moral culture, with a cheerful, contented disposition.

With the increased knowledge and observance of these laws of health, many individuals have not only prolonged their own lives, but the average duration of human life, within forty or fifty years, has considerably advanced. But physiology in its practical applications is yet in its infancy. When its principles become so generally understood and appreciated as to be practically applied throughout the community, in every family, and by every individual, then will be found a great diminution of disease, as well as of early mortality. Now, by having a true standard of organization for testing a good constitution, and by understanding correctly the laws of hereditary descent, it gives us new and more definite views of the various conditions of health. In the examination of persons for Life Insurance, all these laws or conditions must be taken into account, and after careful and thorough investigation, it will finally be found that all these principles and agencies operate in harmony with, and are based upon, one great general law in nature—the law of longevity.

The question may still be asked, Wherein, how, or in what way more in detail, can this law be made practical? To answer this question fully would require a volume. Only two or three further suggestions can here be offered.

It points out directly the true means or sources of health and life,—that there is no chance or mystery in them, but that they are all governed by laws which can be understood and obeyed. It expounds correctly the great laws of inheritance which furnish the groundwork—the prerequisites for good health and long life. It explains the absolute necessity in the outset of a sound constitution, of a well-balanced organization. It shows the relation and importance which human agency holds in propagating a sound and healthy stock. It teaches every individual more clearly what are the peculiarities and weaknesses of his own constitution, as well as what are his particular dangers or liabilities to disease. It is this exact, this definite and personal knowledge that may be turned to the greatest account in the prevention of disease. If every individual in the community could be thus made acquainted with his own physiology, together with the laws of hygiene, we should soon see a most surprising difference in the relative amount of sickness as well as of early mortality. And who can appreciate the advantages of such a law, or make so good an application of it, as the well-educated physician, whether he be in private practice or holds some official position before the public?

Miscellaneous.

Answer to Communication.—To R. S. C., of Illinois, we would reply, that the quickest way to correct the evils of which he complains is for every respectable physician to refuse to act as examiner for any Life-Insurance Company that knowingly allows "Eclectics, Botanics, Homœopaths, Cold-water Doctors, Snapping Doctors," etc. to make medical examinations for them. Something like united action on the part of the reputable physicians in the State would soon bring these loosely-managed companies to their senses, and compel them to employ exclusively either the "Cold-water Doctors" or the regulars.

A Government Cholera Commission.—The Hon. J. Proctor Knott, formerly a Representative in Congress from Kentucky, has written letters to Congressmen and to the Surgeon-General, urging a Government investigation of the origin and spread of the cholera last summer. The Surgeon-General indorses Mr. Knott's suggestion, and to-day the House passed a resolution, on motion of Mr. Dawes, directing the investigation to be made by one or more army surgeons detailed for the purpose. Medical officers, with special qualifications for the work, will be assigned to this duty, and it is believed that the result of their inquiries will throw much new light upon the subject, and be of great interest to the medical and scientific world. All the localities where the disease raged will be visited, and the experience and opinions of local physicians and Boards of Health will be considered.—*New York Tribune*, Jan. 8.

"Remarkable Action on a Life-Policy.—A very singular case of action upon a life-policy was this week submitted to the Civil Tribunal of Paris. The circumstances are so curious that we give the facts in extenso, as we find them related in the report of *Galignani*. It appears that in Sweden, as in England, it is not unusual for people to effect, by way of speculation, insurances on the lives of individuals not connected with them. In 1855, one Svenson, of Carlscrona, insured the life of an old soldier, named Hoffstedt, of the same place, in the Mentor Company of London, for 8000 rixdollars, and in the Paternelle Company of Paris, for 7,500 francs. In August, 1856, Hoffstedt died, and Svenson claimed the amount insured in the two offices. The Mentor Company paid at once; but the Paternelle Company thought fit to institute an investigation respecting the death. It then turned out that Hoffstedt was a confirmed drunkard, and that Svenson supplied him money to enable him to drink brandy in excess, his object being, it was affirmed, to hasten his death. The old soldier at last died very suddenly, and the rumor was spread that Svenson had poisoned him by putting arsenic in the brandy. The dead body was examined, and arsenic was found in it. Svenson was consequently arrested and brought to trial before the Criminal Court of the district, on the charge of poisoning. But the charge could not be established. He was acquitted. As, however, he was proved to have had arsenic in his possession—and in Sweden this is illegal for a private person—he was fined sixteen rixdollars. On an appeal, the judgment was confirmed. The public prosecutor then petitioned the King to cause the man to be imprisoned in a fortress, on the ground that there was no moral doubt of his guilt. In August, 1857, his Majesty refused this petition; and at length the man was released. Meantime he had become bankrupt. The assignees now instituted proceedings for payment against the Paternelle Company, in Paris. The ground on which they based the action was, that the judgments of the Swedish courts proved clearly that no murder had been perpetrated, and that the company could not prove that Hoffstedt committed suicide, so the insurance remained valid. The company, however, contended, first, that the judgments of the Swedish courts were not binding in France, and consequently that their acquittal of the man amounted to nothing in the eye of the law; next, that as Hoffstedt had undoubtedly died of poison, it was clear either that he had committed suicide, or that he had been poisoned by the man who was to benefit by his death, either of which cases, in France, rendered an insurance invalid. The Civil Tribunal, adopting the arguments of the company, rejected the action."—*Lancet*, Dec. 10, 1859.

Original Communications.

LARYNGEAL PHTHISIS.

READ BEFORE THE MEDICAL LIBRARY AND JOURNAL ASSOCIATION.

By R. P. LINCOLN, M.D.,

NEW YORK.

(Concluded from page 86.)

SYMPTOMATOLOGY.

WHATEVER be the cause of laryngeal phthisis, we always have a chronic inflammation to deal with, subject to exacerbations due to intercurrent acute attacks. There is, therefore, no well-marked difference in the subjective symptoms of this affection over other chronic laryngeal diseases.

In addition to the sensation of tickling, which this affection shares in common with all other inflammatory diseases of the larynx, usually the first symptom of which the patient complains, and which leads him to consult his physician, is a cough. This, which at first may be but a slight and ineffectual effort to clear the throat, gradually attains a more pronounced character, and often becomes spasmodic in its nature. The sound of the cough, being modified by the same organs that form the voice, corresponds in a degree with it. When we have dysphonia, we will have a rough, hoarse cough, entirely destitute of resonance; this may be due, not necessarily to a deficiency of volume of air from the lungs, but to the action of the glottis (the healthy explosion of which, so to speak, gives the clear ringing cough), that is impaired either by some obstacle that prevents the contraction of the muscles, or by some modification of the cords themselves.

The patient will sometimes give you an account of an attack of sore throat, from which he thinks he never entirely recovered, but as often he cannot lay claim to any exciting cause so definite. With the increase of the disease the cough will become excessively harassing, particularly at night, and almost always aggravated by a change of temperature, as when going from a warm room into the outer air, or *vice versâ*.

The vast majority of patients complain of pain of a dull, aching character, and often of a smarting and burning, amongst the early phenomena. At first this is not increased by pressure, but later in the disease, when the tissues are much swollen, it is much aggravated by pressing the larynx back or by compressing its alæ.*

Distinct from the sensation of pain, but closely allied to it, is that of dryness, which is alone very distressing, and not allayed by frequent applications of fluid.

You will also be told of difficulty in deglutition, and of actual pain in the effort, as well as in the act, of swallowing. This occurs when the epiglottis is thickened or destroyed in whole or in part, so that its office is imperfectly performed, and particles of food or liquid, which is more liable to happen, passes within the larynx and excites spasmodic coughing.

When there is much œdema within the larynx, and particularly when the arytenoids and their appurtenances are involved—and they almost never escape—their compression by the muscles of deglutition may be attended by so much pain that the patient will often abstain altogether from attempting to swallow, and, unless efforts for relief are availing, we may literally witness the unpleasant spectacle of a starving and famishing patient.

Disturbance of respiration does not attract attention under ordinary circumstances till the disease is somewhat advanced. Almost the first of the phenomena of this derangement occurs only during inspiration, the sound becoming rough and sufficiently audible after exercise to attract attention, while the expiration may be without effort and natural. Should an acute laryngitis occur during this stage we will have a stridulous respiration, and the recovery from the attack will be more than usually slow; but ordinarily the dyspnœa is in proportion to the development of the disease.

If there is co-existing pulmonary disease, particularly if there is much debility, a panting respiration, after even slight exertion, will be an early symptom, which the patient will wait to recover from before replying to your questions.

When the calibre of the glottis is encroached upon, either by sclerosis or by œdema, we will have constantly all the symptoms of œdema glottidis, and at all times the respiration will be labored, while in the last stages of the disease there will be paroxysms of dyspnœa, suffocative in their nature, which the patient often calls asthmatic. These paroxysms, which commonly at first make their attacks at night, a little later are excited by any violent exercise, and are attended with a sense of oppression, and often with a flushed or livid condition of the face, and an anxious expression to the whole countenance, even when there is no disease in the lungs themselves, though that will make this symptom much more marked.

The function of the larynx is of course always impaired in this affection. In the early stages of the disease the voice may only have its quality slightly altered, but before the second is passed there will be complete aphonia, which at first may be remittent, but sooner or later constant; at first there may be only a weakness after use, to be restored by rest; but in a short time it becomes continually husky with an indistinctness, then a uniform hoarseness and discordance, and finally only a rough whisper.

Simple weak phonation usually attends, and is consequent upon a general congestion of the mucous membrane of the larynx, with its consequent dryness, and perhaps slight tumefaction; huskiness upon the thickening of the vocal cords.

The complete loss of voice depends upon ulceration of different organs, particularly of one or both vocal cords, and upon œdema.

This inequality or discordance of the voice is often noticed in laryngeal phthisis, and cases have been reported by Merkel and Türck where a double tone was produced, and explained by a collection of mucus between the vocal cords and ventricular bands, and by growths and polyps on the vocal cords dividing the glottis into unequal parts.*

The expectoration in simple laryngeal phthisis is almost always of a moderate quantity, and varies in character with the different stages of the disease, from a frothy mucus, in the first stage, to purulent, with, at times, traces of blood, and exceptionally the débris of disintegrated cartilage.

Before the disease has very far advanced, the product of the muciparous glands becomes, in consequence of the congestion, quite gelatinous, when the sputa will resemble prepared starch; this often contains dark particles from the inspired air, or what Dr. S. Scott Alison has described as the carboniferous corpuscle. Sometimes the frothy mucus will contain small but distinct

* Late in the disease, to which there are very few exceptions, when the pain becomes excessive in the larynx, it extends with equal severity to the ears and down the neck to the shoulders.

* Quoted in Boston Med. and Surg. Jour., Nov. 21, 1872, p. 358.

drops of pus, and even blood, which are thrown off, circumscribed ulcers or sinuses leading to the seat of a former abscess; at other times the sputa will be uniformly purulent, but varying in degree and very tenacious.

Usually the sputa is raised with some difficulty, and after repeated efforts by a process of clearing the throat rather than by a deep cough. This is caused in the first stages of the disease more by the congested and swollen state of the parts than by the amount of the sputa; but later the tenacious muco-purulent sputa may be comparatively abundant and yet adhere strongly to the bottom of a large but superficial ulcer. If there is accompanying pulmonary phthisis or chronic bronchitis, the abundance of sputa from this source will mask any distinguishing features of the sputa of laryngeal phthisis.

An appearance of blood in the expectoration is not unfrequent during the course of the disease. It is usually small in amount, continues but for a brief time, and occurs at short intervals.

Coming on usually after an effort of coughing or clearing the throat, the sputa is then streaked with bright arterial blood, though sometimes a small clot will be thrown off, in which case it may be of a darker color; in the first instance it is seldom so intimately mixed with the clear or yellow sputa as when it comes from lower down in the air-passage and when in clots, usually smaller than when it comes from the lungs.

The discharged blood may issue from any of the tissues of the larynx. When the mucous membrane is highly congested, as may be the case whatever be the stage of the disease, some small blood-vessel may be ruptured in the violence of coughing and a small quantity of blood escape. We have seen it *in situ*, having burrowed under the mucous membrane a short distance, as sometimes occurs beneath the conjunctiva, from injury. The same condition is also sometimes seen in the pharynx. Hemorrhage may also occur from a blood-vessel divided in its course by the progress of an ulcer.

Emaciation is not a prominent symptom in simple uncomplicated laryngeal phthisis, except in the very last stages, when it is a result, less of a consequent drain on the system than on account of imperfect deglutition, labored respiration, and wearing cough that interfere with the repair of the system, arterialization of the blood, and restorative sleep.

Under the same circumstances as the loss of flesh, when a hectic condition supervenes, we will have a harsh, dry state of the skin, with rarely a slight elevation of temperature; this latter is insignificant when compared with the analogous state in pulmonary phthisis.

It rarely happens that the digestive organs evince any morbid action in this affection, certainly not directly in consequence of it.

The partial loss of the hair, weakness of the sexual instinct, absence of the catamenia, and other evidences of wasting of the bodily powers, so commonly early observed in patients subjects of phthisical degeneration in other organs, are not observed in simple laryngeal, except it has lasted a long time and has proved nearly destructive to life.

Before the invention of the laryngoscope the only means of mediate investigation was the "tactus-eruditus," which could have been of little service, except to detect destructive action of the epiglottis, and in another condition which often forms one stage of this affection, viz., œdema glottidis. Dr. Buck has given full and careful directions how to conduct this means of exploration. It depends upon a thorough knowledge of the anatomy of the parts and a familiarity of touch.*

By means of the stethoscope we can detect, when there is much mucous or pus present in the larynx, large, moist, and sub-crepitant râles. When fluid is not present, we will get a high-pitched sound in respiration, as an evidence of constriction. These sounds will, of course, be most strongly marked at the point of greatest interference with respiration, and through the tissues of the neck transmit the sound with remarkable distinctness, yet it will generally disappear as our examination is extended towards the lungs.

Ocular inspection of the pharynx in this affection, when there is associated tubercular cachexia, discloses a marked anæmic appearance, and at the same time unusual capacity (probably from atrophy). This condition should always invite examination of the whole respiratory tract.

It needs no argument from us to convince you of the superior advantages of the laryngoscope over all other means of investigation. It reveals to us, with no chance for error of judgment, all the pathological changes we have previously described, except, of course, those deep in the substance of the tissues, and these even are attended with superficial changes from which we can infer the former.

We have reflected in the laryngeal mirror, first, the epiglottis, which we may find anæmic, congested, swollen, or red, distorted or destroyed in different degrees. We may find the mucous membrane of the whole larynx in an unusually pale, almost transparent state, with here and there red velvety patches, or, perhaps, small points of ulceration. At other times there may be seen a general condition of congestion of the whole laryngeal mucous membrane, even including the vocal cords.

The appearance of the interior of the larynx, so far described, is characteristic of all forms of chronic laryngitis. However, as the disease progresses and infiltration occurs, we find a degree of swelling takes place at certain parts that is highly characteristic. The outline of the arytenoid cartilages becomes transformed into pyriform-shaped bodies, with their base situated posteriorly and apex upward, forward, and outward; the ary-epiglottic folds participate in the formation of this tumor, which may at first involve only one side, but sooner or later extends to the other. When both sides are thus affected, the two will be seen in contact in the median line; or they may even become so large as to intercept a view of the parts below. These tumors are of a pale color, and usually covered with mucus and pus given off their ulcerated surfaces. When suppuration takes place within them, its evacuation is attended with a diminution in size, and pus can be seen escaping from the opening, which often enlarges so as to expose the diseased cartilage at its bottom.

The ventricular bands often appear distended, overhanging the vocal cords themselves, while the latter are often seen highly inflamed, losing their characteristic white color, or ulcerated at the processus vocalis and along their margins, the borders of which are sometimes studded with small granulations of a polypoid appearance.

DIAGNOSIS.

There are but few morbid conditions of the larynx whose lesions are liable to be confounded with those of this affection. Its beginning is, as we have seen, often insidious but progressive, though at times it may supervene on an acute laryngitis, in which case there is nothing characteristic in the local primary manifestations; its objective symptoms are manifested in the

* Trans. Am. Med. Ass., vol. i., 1848, and vol. iv., 1851.

voice, cough, respiration, etc., and are, therefore, common to nearly all organic alterations depending upon inflammation, ulceration, and œdema. We are, therefore, compelled to make our chief dependence for reliable diagnosis upon the evidence furnished by the laryngoscope. The obstinate progress of the disease, its long standing, the harassing cough and general constitutional deterioration, with the considerable thickening of the parts, are among the differentiating points to be considered in distinguishing this affection from chronic laryngitis. In this latter disease we always have an active bright red-congestion, which involves also the pharynx, and this, with the uvula, are generally relaxed. Another distinguishing mark is the superficial nature of this ulceration compared with that of laryngeal phthisis. The microscope is of service here.

In simple catarrhal laryngitis the mucous secretion is effected without a destruction of the epithelium;* while in the first lesion of laryngeal phthisis this is destroyed, leaving a new mucous surface, which pours out a muco-purulent secretion.†

Formerly it was necessary to describe in detail the symptoms to distinguish spasmodic asthma, but now we can determine at a glance the presence or absence of organic changes, though the complete remission of the dyspnœa in the one case, and its stridulous character in the other, is usually sufficient to distinguish the affection.

Acute œdema is recognized by the sudden onset of the attack, previous freedom from symptoms of disease, and the transparency of the tumor, which is the only local evidence of disease.

The majority of the benign growths that appear in the larynx are readily recognized by the aid of the laryngoscope, many of them being pedunculated or sessile, and not intimately blended with the adjacent tissues.

Cancerous growths are not so easily distinguished from appearances exhibited in certain stages of laryngeal phthisis, and our diagnosis will rest, in addition to the information supplied by the constitutional history and objective symptoms, on the fact of its being blended thoroughly with the surrounding tissues, extending beyond the larynx, and not involving both sides to the same extent, Displacement of the larynx by the growth is common. When the malignant growth becomes ulcerated, the discharge has a characteristic offensive odor. A microscopic examination of fragments will often aid us in these cases.

Syphilitic lesions frequently locate themselves in the larynx, and often give evidence of their presence in a similar manner to like lesions of laryngeal phthisis. The collateral symptoms that exist, or may have existed, on the skin and elsewhere, are of prime importance as an aid to differential diagnosis. Syphilitic ulcerations in the larynx are very commonly extensions of similar conditions in the nasal fossæ, palate, or pharynx, while in laryngeal phthisis this is rarely the case. In the latter disease the mucous membrane is usually paler than normal, even when there is considerable thickening; in syphilitic inflammation, on the contrary, it has a dusky color, which by some is considered pathognomonic. There is nothing characteristic in the form or locality of the ulceration. Trousseau quotes Dr. Krishaber as authority for the statement that simple non-diasthetic ulceration of the larynx is the most destructive.‡ But it certainly is not rare to find the epiglottis completely destroyed by syphilis. There is, however, comparatively less thickening of the tissues, though the superficial ulceration may be larger in syphilis than in phthisical laryngitis. The same authority states that the aphonia of syphilis is almost always caused by a puffy state of the superior vocal cords, and that of laryngeal phthisis is more commonly caused by ulceration and inflammation of the vocal cords proper.

Warty growths, or condylomata, are often seen as a result of syphilis, but never in laryngeal phthisis; they are observed as whitish, uneven elevations on the mucous membrane, which sometimes ulcerate and always quickly disappear under proper treatment. They are not likely to be mistaken for the small, polyp-like bodies on the edges of the ulcers sometimes seen in laryngeal phthisis. In syphilitic laryngitis the epiglottis is most frequently the first seat of attack, and the mucous membrane covering the arytenoid cartilages the last, even after the vocal cords and other parts of the larynx; while in laryngeal phthisis the ary-epiglottic folds, particularly at the point of the arytenoid cartilages, are first in the order of attack, the epiglottis later, and after it the ventricular bands and vocal cords.

The principal lesions not present in syphilis, but which are almost constant in laryngeal phthisis, and peculiar to it, are the pyriform swellings of the ary-epiglottic folds and ulcerations, preceded by a thickening of the tissues and of a slow and chronic disposition.

PROGNOSIS.

Were the disease purely local, our prognosis would be favorable; but when we consider it a local manifestation, modified by a cachectic constitution, our prognosis must be unfavorable, except our patient early present himself, and before any other important organ is seriously impaired. There may be cases, well advanced too, of recovery, as there are instances of recovery from pulmonary phthisis, but they are comparatively few in number. As is often the manner in pulmonary phthisis, so in laryngeal phthisis, death may result not so much from the local trouble as from the combined depressing and wasting influences of intercurrent maladies. Doubtless cases are reported by competent authority where death has resulted from the hectic fever, harassing cough, emaciation, and debility, when no other disease has supervened; but usually the immediate cause of death in such patients is asphyxia. Many escape a fatal termination—how many we cannot tell—so uncertain is the diagnosis in the very beginning of the affection, and this fact should be a sufficient monition for an early and general examination whenever the laryngeal affection shows a tendency to persist. Local treatment modifies very much the course of the disease; the œdema may be reduced, the congestion relieved, and the ulceration often healed. A few cases may recover, but we can almost always afford our patient at least temporary relief from suffering and prolong life.

TREATMENT.

Treatment can naturally be considered in its three aspects—preventive, remedial, and palliative.

The first consists of a correction of any morbid habit or tendency of the system, and controlling, without delay, any slight manifestation of disease in the throat. There is no affection where the importance that general treatment should be early entered upon is more manifest. Correct the tendency to degeneration, and half the battle is won; but if this point has been passed,

* Rindfleisch, in Archiv. f. Path. Anat., von Virchow, t. xxi.
† Dict. Encyc. des Sci. Med., p. 644.
‡ Clinical Lectures, Amer. Trans., vol. iii., p. 106.

and irregularities are already established, it is of even more importance to correct *them*.

In the list of causes, we have considered at sufficient length the different conditions that seem to invite laryngeal phthisis, and it is unnecessary to repeat general rules of treatment for the different cachexia so often associated with this disorder.

It is a good axiom never to allow, if we can prevent it, the system to harbor anything evil.

If, for instance, a patient presents himself evidently debilitated, and illy nourished and generally deteriorated, in consequence of a strumous diathesis, and there is reason to apprehend any laryngeal trouble, there is at once suggested a residence for the summer at the sea-side, or for the winter in a more equable climate than ours; pure air and proper exercise in it, nourishing but unstimulating food, warm clothing and avoidance of excess of all kinds, whether in the use of the voice or in overtaxing body or mind. If sea-bathing is not practical, salt-water bathing, cold in hot weather and warm in cold, to insure a free action of the cutaneous surface. The strength of the patient must be early considered, and remedies directed that will tend to increase constructive metamorphosis, give vigor to the solids, and vitality to the blood. The destructive metamorphosis should be checked till at least it is more than counterbalanced by the reparative power.

Catarrhs of all kinds, wherever situated, should receive due attention, as well as excessive menstruation, when it exists.

For remedies, food, tonics, cod-liver oil, iron, sulphur, and arsenic, may be severally indicated when the digestive functions are well performed. When the building-up process is once established, iodide of potassium will often increase it. Should reflex irritation from the lungs or any distant part be threatening, some of the bromides may be of service, and if there is already a congestion or inflammation in the air-passages below the larynx, some inhalation of an astringent, sedative, or antiseptic nature will be of much service; carbolic acid thus employed has often seemed to us to allay irritation there, and thus indirectly prevent trouble in the larynx.

If pulmonary phthisis exists, though it even be an advanced stage of the preceding diathesis, what we have said there will equally apply here, and, if possible, should be insisted upon with even more emphasis, because of the gravity of the complication.

We will only refer here to the value of counter-irritation over the diseased lung, and caution against the use of iron and stimulants during the inflammatory states.

Inhalations, if properly administered, are always of advantage, whether antiseptic, as carbolic acid, or soothing and sedative, as preparations of tar, bromide of ammonium, steam, etc.; these will always have a favorable influence on the cough. Should the statement of Niemeyer, that the sufferer from pulmonary phthisis has most to fear tuberculosis, prove to be correct, we have a powerful weapon in antiseptic inhalations. The syphilitic dartrous, and any special diathesis, the presence of whose poison in the system is impairing it, must be each combated.

The remedial measures will be chiefly directed to the local manifestation of the disease, and at the same time those should be employed calculated to prove effective against any intercurrent disorders resulting therefrom. The cases where the affection is purely local, or where it is but slightly modified by some cachexia, afford the most encouragement for the success of treatment whether general or local. The latter has the most power to back the tide of disease, and the former to preserve the ground gained, and prevent a relapse.

When we have the first lesions, congestion and erosion to deal with, a spray of some astringent, as solutions of tannin and glycerine, of alum, of the sulphate of zinc, or of iodine, will be of the utmost value; at the same time some counter-irritant over the larynx and on its sides, by means of tincture of iodine, thepsia plaster, or croton oil; when this is not sufficient, a small blister at the point indicated, especially on the access of an acute exacerbation, to be allowed to heal at once, and again repeated rather than to be managed as an issue; if the latter object is sought, we would prefer to place it at a distance, as on the nape of the neck.

When the mucous membrane and submucous tissue is hypertrophied, no remedy, locally applied, will accomplish so much as solutions of nitrate of silver of different degrees of strength, and applied in the form of a fine spray.

Of all remedies for topical application, none is so much used, and none so much abused, none has stronger advocates or more bitter opponents, and probably none so generally useful, though, when misused, capable of doing greater harm, than nitrate of silver.

If there is much œdema, it must be relieved by scarification, advantageously followed by some one of the previous remedies, or by the application, in which case it is to be very circumscribed, of the chloride of zinc or of gold, by means of saturated lint on the end of a probe.

When there is much acute congestion or inflammatory swelling, and the mucous membrane livid and dry, inhalation of steam or of some balsamic fluid, or the local spraying with tannin and glycerine, will sometimes unload the vessels and give relief without incision. Should an abscess make its appearance, its early evacuation by free incision will limit the destruction, relieve the pain, and perhaps prevent suffocation.

When ulceration is present, extending into or deeper than the mucous membrane, or acting on a cartilage, as the epiglottis, nitrate of silver will be of great service, or chromic acid with one-fourth its weight of water. Iodoform, in the form of a powder, we have found particularly useful in aiding cicatrization and stopping pain.*

Of associated or intercurrent disorders pharyngitis is very common, and may demand active attention. Most of the affections of the pharynx are similar to what we have described as occurring in the larynx, and the course of treatment pointed out for the diseases of the latter is adapted to them also. In addition thereto, when we have a congested or hypertrophied state of its mucous membrane, with dryness or diminished secretion, chlorate of potash, preferably in the form of troches, is of great value; while in the opposite condition, when the parts are relaxed and flabby with excess of secretion, lozenges of tannic acid or kino are serviceable; but if they are merely irritable and sensitive, bismuth, gum-drops, marsh-mallow or slippery-elm decoctions will be grateful. The patient can cooperate effectively, when the pharynx is involved, by employing solutions of alum, tannin, and salt, in the manner of a douche, directed against its walls; † the remedies thus used being far more profitable than when managed as a gargle.

If enlarged tonsils be a source of irritation, their speedy removal will be called for.

Sometimes a febrile state, greater than would be expected from the lesion alone, will be met with, in

* For cases illustrating its use by the author, see THE RECORD for Sept. 15th, 1873, p. 449.

† For a description of this method by the author, see THE RECORD for Nov. 1st, 1873, p. 551.

which case it will be advantageous to administer alkalies, as the carbonates of soda or potash; or if a state of atony or anæmia, iron, quinine, or strychnia, or, which is a good combination, their phosphates, according to the formula of Aitken.

Should a diarrhœa make its appearance, it should always receive immediate attention. Remedies called for as curative will, of course, when it is too late in the disease to expect recovery, have a palliative influence.

It should be our pleasure as well as duty to tax our energies to assuage suffering, for under the most favorable circumstances, when the disease goes to a fatal termination, or when it attends death from any other cause, much distress will rarely be avoided. Our resources are many, and our means of reaching the disease most complete.

One of the chief sources of danger in the last stage of laryngeal phthisis is death from apnœa, on account of closure of the glottis from œdema. Though the risk to the patient is less now than formerly, on account of our improved facilities of treatment, yet its possibility should not be overlooked, and we should be prepared to perform tracheotomy as a last resort when necessary.

Porter strongly advised it, though it was first suggested by Bryant.

Porter went so far as to practise it early in the disease as a method of treatment: his object was to put the larynx in a state of rest, the most favorable for recovery. If there is necrosed cartilage that is causing irritation and that threatens suffocation, tracheotomy may give a chance for its safe removal and healing of the wound.

There is much encouragement for this proceeding, if no other part of the system is so far diseased as to be itself a source of danger.

The pain and sense of constriction, which often extends from the larynx to the shoulders and to the ears, are best relieved by stimulating or hot external lotions; these are best applied on spongio-piline, which can be fitted to the neck, and we can thus avoid the weighty poultice.

When this pain in the ears requires interference, anodyne applications in the external auditory canal will sometimes notably give relief, and it is the testimony of a patient now under our care, that relief also extends to the larynx.

The best local anæsthetic in our hands has been iodoform, applied directly to the ulcerations after the removal of the discharge. This is best done by means of a curved tube, provided with a piston, which, under the direction of the laryngeal mirror, can be easily used.

We shall always have occasion, in this stage of the disease, to employ those soothing and mechanical remedies previously spoken of, and we might advantageously add thereto preparations of refined chocolate, which nourishes as well as soothes.

REPORT OF CASE OF
REMOVAL OF A FOREIGN BODY FROM BLADDER BY PERINEAL SECTION.

A NOVEL METHOD OF EXTRACTION.

BY GEO. C. SMITH, M.D.,

RONDOUT, N. Y.

JAMES K., resident of this village, aged 24, good health, cooper, while experimenting (as he says) with a glass tube, attempting to pass the same as a catheter, which he thought it resembled, had the misfortune to break the tube within the urethra, the distal portion slipping at once into the bladder.

In great alarm the patient withdrew the other portion, and threw it out of the window, into the snow below, and it was lost: but the patient thought at least three inches in length remained within.

The case came into my hands on the following day, February 13th, 1871, and an operation for its removal was at once set down for the 14th (day following), and patient was prepared for perineal section by lateral operation. Operation was successful and recovery quick, and complete restoration of all his functions. The flow of urine per urethra was re-established on the 19th, and on the 7th of March patient was discharged cured.

The tube proved to be three inches long, size of No. 9 catheter, slightly curved from end to end, and as frail as an ordinary silver catheter would be if made of glass, smooth at one end, but rough in fracture at the other end; and in manipulating with forceps, after it had been seized, it became necessary to inject the bladder with warm water, in order to disengage its ends from the folds of the cyst.

The chief point of interest to the profession in recording this case, is the successful application of an ingenious device by my friend Dr. A. T. Douglas, of this village, who was associated with me throughout the operation and subsequent treatment. The tube was known to be long and very fragile, and it became desirable to remove it without breaking, if not already broken; and at the suggestion of the Doctor the jaws of the forceps were coated with "taffy" (molasses-candy), to secure adhesion and protect the glass from fracture, and also being soluble at the temperature of the body, not liable to leave any nucleus behind for future calculus.

CASE OF RETENTION OF URINE FROM ENLARGEMENT OF THE PROSTATE.

USE OF THE ASPIRATOR FIFTEEN TIMES—REMARKS.

BY S. FLEET SPEIR, M.D.,

SURGEON TO THE BROOKLYN CITY HOSPITAL, SURGEON TO THE BROOKLYN EYE AND EAR INFIRMARY, ETC.

MR. R., aged 64 years, healthy, with a previous history of slight trouble of the urinary organs. On Monday, December 1st, 1873, I was called, in consultation, by Dr. W. K. Brown, to see this patient. He had been suffering from retention of urine since early Sunday morning, and since then occasionally a drop at a time would come away. I found the bladder greatly distended, reaching nearly to the umbilicus, and the patient had suffered most intense pain during the previous night from distention. This pain had been relieved by Dr. Brown by means of morphine suppositories and laudanum injections in large doses. When I saw him, Monday noon, he was free from pain, and under the influence of the anodynes; he had had a comparatively quiet night. I endeavored to pass the usual urethral instruments, and failing with them, tried Squire's vertebrated catheter, using two sizes, but without success. As I had previously used this instrument successfully in similar cases, I concluded that there was more than ordinary obstruction. I then tried the various modifications of the elastic catheter, but with similar result. I succeeded, however, in passing a filiform bougie into the bladder, and followed it by a grooved canula of small size, but there was no flow of urine; and after patient efforts at catheter-

ism I concluded to use the "aspirator," as the case was growing more and more serious, and relief from the distended bladder was demanded immediately. I therefore introduced the trocar of the aspirator above the pubes, and drew off (2) two pints (3) three ounces of urine, with perfect relief to the patient. He passed a comfortable night, and in the morning began to feel some sense of fulness of the bladder, and at 1½ A.M. I relieved him of 2 pints of urine by the same process, Dr. Brown having in the meantime tried to introduce the catheter. I also tried to introduce the catheter before and after "aspiration."

On careful examination per rectum, the prostate gland was found considerably enlarged, and there was tenderness on pressure. The prostate seemed to rise above and obstruct the opening of the urethra in the bladder. This attack of retention was the first ever experienced by the patient, although he had at times some trouble, on rising in the morning, to get the urine to flow, but he has always succeeded in emptying the bladder in a few minutes without much trouble. He had recently been exposed to cold, and his attack was attributed to that cause.

I tapped the bladder eleven times during the week following, sometimes once in twenty-four hours, and sometimes twice in twenty-four hours, and in the meantime made efforts at catheterism, hoping to get through the urethra as soon as the irritation and swelling had subsided. The result of each effort being negative, I finally passed a filiform bougie and urethrotome of Maissonneuve, and performed his operation of "catheterism à la suite." After this operation I was able to pass at once a large-sized silver catheter into the bladder, but to my surprise no urine flowed. I was sure that the catheter was in the bladder, from its position, etc., and could only account for the urine not passing out through the catheter, by the probable want of tone in the walls of the bladder. I applied pressure to the abdomen, but no flow of urine following this, I attached the end of the catheter to a rubber tube, and then to the point of the aspirator, and exhausting the syringe looked expectantly for the urine to flow (supposing that a clot had obstructed the eye of the catheter). Even now no urine came, and I was obliged to trust to a reintroduction of the catheter on the following day for better results (being sure that the catheter had entered the bladder and the road was clear, but for some obstacle which I could not understand—perhaps too small quantity of urine, etc., etc.), the bladder having been aspirated previously. This was left to Dr. Brown. That night he introduced the catheter, but no urine flowing, he was obliged to "aspirate" the bladder again; and he, supposing that possibly the catheter had not entered the bladder fairly, and that there might still be some obstruction, did not send for me until he had found it necessary to use the aspirator four times more. He then sent for me to see the case again. I found no difficulty in introducing the catheter into the bladder (same as immediately after the urethrotomy), but again no urine flowed. I was now very confident that all was ready for the emptying of the bladder through the catheter, and that by a more thorough use of the aspirator attached to the catheter we must succeed. I therefore adjusted the rubber tube with care, and we exhausted the air as completely as possible, the patient experiencing no pain. I was sure we were in the bladder, otherwise the mucous membrane would have been drawn into the eye of the catheter, and given pain, so we continued the pressure and watched the end of the tube. Presently a thick, ropy, tenacious mucus appeared at the end of the tube; so dense and tough was it that it could scarcely pass, and hung from the end of the tube until it reached the bottom of the vessel. By exhausting the syringe more carefully, and by pressure upon the abdomen, we succeeded in drawing off about one-half pint or more of thick, tenacious mucus. The aspirator was removed, and some tepid water was injected with great ease into the bladder, and a portion of it was drawn off again by the aspirator attached to the catheter.

The next day aspiration through the catheter was resorted to again, and after injecting the bladder with tepid water, and making pressure over the abdomen, we succeeded in returning the injected water, mixed with mucus, *through the catheter, without the aspirator*. It came very slowly at first, and only by means of strong pressure over the abdomen. After this the bladder was emptied regularly, through the catheter, by Dr. Brown, and occasionally injections were made. The patient was taught to use the catheter for himself, and he is now doing well, the mucus having almost entirely disappeared.

I have reported this case to illustrate the great value of the "aspirator" in the treatment of difficult cases of retention of urine, as well as to mention a few points which seem of interest in the case.

The bladder was tapped over the pubes, in all, fifteen times, without the slightest discomfort or injury to the abdominal walls. The introduction of the point of the trocar, after the method of using the hypodermic syringe, without incision of the skin, gave a smaller wound and was more satisfactory than the incision. An important point to be attended to when frequent punctures are needed, is to see that the point of the instrument is withdrawn only when there is a perfect vacuum: then all urine and blood that might possibly lodge in the punctures will be sucked out, and the wound firmly closed and clean.

Although there was no genuine stricture in this case, the management of it was greatly assisted by the operation of internal urethrotomy.

I desire especially to draw attention to the great *accumulation of mucus that may take place in the bladder after repeated tapping with the "aspirator."* The upper portion of the urine is usually drawn off (the patient lying upon the back), and there is a constant accumulation or deposit of mucus and salts at the bottom of the bladder; and in cases of vesical irritation or inflammation it may become *very dense and tenacious*, obstructing the eye of the catheter and giving rise to the suspicion, on the part of the surgeon, that his catheter has not reached the bladder, or that there is but little urine present, when, in fact, the reverse is true, and all that is needed is a sufficient force to compel the thick mucus to pass.

This case is also instructive in showing the necessity for injections into the bladder in all cases where repeated tapping is likely to be needed. This should be done through the tube of the aspirator, and the fluid withdrawn again by the same means. In this way the collection of mucus would be prevented.

ON THE REMOVAL OF GROWTHS BY THE ELASTIC LIGATURE.—In a letter to *The Lancet* of Jan. 3, Sir Henry Thompson further explains the application of this method, and says that having found that the india-rubber tube which he employed in the case reported did not quite answer the purpose, he has had made an india-rubber cord, which, before application, is in size about as follows: [redacted]. When applied it should be strained until it is a mere thread—say like this: ————————

Reports of Hospitals.

BELLEVUE HOSPITAL.

Notes of Practice and Peculiarities of Treatment.

HYPODERMICS OF TR. DIGITALIS.

A woman was brought into the medical wards who was suffering from cardiac disease and its attendant phenomena. The lesion was mitral regurgitation. Her feet and limbs were very œdematous, her heart was acting in a very irregular manner, and there was almost constant vomiting. The patient had been accustomed to taking digitalis for the purpose of obtaining relief from palpitation, which had followed her for many years. She had rheumatism fourteen years ago. Her vomiting prevented the administration of any remedy by the mouth, and drachm doses of tr. digitalis were administered by injections into the bowels. Failing to obtain the effect desired, quieting of irregular action of heart and production of diuresis, by administering the remedy in this manner, resort was had to hypodermic injections of gtts. vj. doses of the tr. digitalis, with the happy result of relieving the palpitation and increasing the amount of urine several ounces within the first twenty-four hours. Acupuncture was also employed, and a large quantity of fluid drained from the limbs in that manner. A few days after admission the patient was quite comfortable, could lie down, and had the appearance as though she might pass along for some time.

Some of the leading changes, pathologically speaking, which are developed in connection with this class of cases, are, first, acute articular rheumatism; engrafted upon this, an endocarditis affecting the mitral valves and parts adjacent, giving rise to new growth of connective tissue, which produces thickening and shortening of the valves, consequently permitting regurgitation upon the auricle and pulmonary veins and capillaries. Immediately following comes the hypertrophy and dilatation of the right ventricle, which, in part, overcomes the pulmonary obstruction. When the dilatation has occurred, there probably have changes taken place in the air-vesicles, consisting of a dilated and tortuous disposition of the capillaries upon the walls of the air-cells, and an accumulation of large cells within the air-cells. The large epithelial cells contain granules of pigment. To this change the term brown induration, or pigment induration of the lung, has been ascribed. The obstruction produced by filling the alveoli more or less with these cell-bodies is the gravest part of the lesion, as it immediately affects the respiration and forms an important element in estimating prognosis. There are also changes in the walls of air-cells.

This group of changes may occur in connection with any disease which prevents free passage of blood from the left auricle to the left ventricle. Subsequent to the hypertrophy and dilatation of the right ventricle comes regurgitation from right ventricle into right auricle, and, consequent upon this an obstruction to the general return circulation becomes established, and from this stagnation are developed pathological changes affecting the liver, intestinal tract, and kidneys. The obstruction being felt in the capillaries, gives rise to dropsies. This patient has been suffering from an accumulation of fluid in the cellular tissue of the lower extremities. When such dropsy manifests itself in the pulmonary tissue, giving rise to œdema of the lungs, the complication is exceedingly dangerous, and prognosis exceedingly grave.

MITRAL OBSTRUCTIVE MURMUR WITHOUT MITRAL STENOSIS.

Such a murmur was developed in a case of general cardiac dropsy, was unusually diffused and quite loud.

As commonly occurs in this class of cases, an opportunity for post-mortem was presented, and when the heart was examined not a particle of stenosis existed at the mitral valve. There were aortic lesions present, and it is thought that the presence of aortic lesions is a necessity for the development of such a murmur without lesion at the mitral orifice. There was aneurism of one of the aortic valves. The explanation is, that the regurgitant current into the ventricle is sufficient to close the mitral valves, and when the auricular contraction comes, the murmur before the first sound of the heart is produced. By some eminent observers the existence of such a murmur, without the lesion of mitral stenosis, is denied. There was no hypertrophy in this case.

THERMOMETER ON HAND.

In absence of a thermometer, almost every man has one ready for use, and that is the *back of the hand.* It is far more delicate than the palm or surface, and will recognize changes very accurately, although it is not ordinarily self-registering, except when the right hand is employed.

TROUBLESOME SYMPTOM.

A man, who was thirty-three years of age, had a cardiac murmur, heard just after the second sound, and with greatest intensity at the base. It was believed that the murmur was at the aortic opening, and that the second sound heard was produced by the closure of the valves upon the right side of the heart. Had rheumatism eleven years ago; and has suffered no special inconvenience until within three years; his *troublesome* symptom has been *palpitation.* Attacks of palpitation would come on, and continue for two or three weeks, and then he would get better, and so on. The treatment of such a case, of course, is hygienic rather than therapeutic. Something, perhaps, may be done for the relief of the palpitation in such cases. It is said that when the hypertrophy exceeds the dilatation, or there is no degeneration of the cardiac walls, the use of prudent doses of aconite or veratrum will often cut short an attack of cardiac palpitation. Sometimes when the action of the heart is very irregular, and the impulse feeble, the organ apparently emptying itself but imperfectly, ext. nux vomica administered in from ¼ to ½ grain doses, three times a day, will set things right and establish quietude at once. It is in this condition that digitalis is serviceable.

ROOSEVELT HOSPITAL.

CHRONIC BRIGHT'S DISEASE.

A case of this kind was noticed which presented some features of interest. The patient was a woman, and fairly nourished. At the time of her admission she was passing only a small quantity of urine, which contained albumen, hyaline, and granular casts. She was immediately placed upon a free milk-diet, without any medicinal treatment whatever. Her general condition at once began to improve, and urine was passed in increased quantities. At the present time the quantity of urine is nearly normal, and at the last examination contained less albumen, and only granular casts.

Since her admission she has suffered from a dis-

agreeable and depressing complication, namely, ulcerative stomatitis. The fetor of the breath was almost intolerable, the ulcers upon the tongue and cheeks were numerous, and some of them were quite large. The opinion was expressed by one of the visiting physicians that the condition of the mouth was dependent solely upon the condition of the teeth. The teeth were very badly decayed. For the relief of both mouth anh teeth, a solution of hyposulphite of soda was employed, and the ulcers were dressed with iodoform. Recovery from the stomatitis was quite rapid and agreeable.

ANGINA PECTORIS.

This is one of those neuralgic affections which fills the patient with fearful apprehensions, in addition to the actual suffering experienced. Its history has so far been perfected that it can hardly be said to indicate the existence of any particular cardiac disease, and, indeed, it is believed that the same train of symptoms may occur, independent of any form of cardiac disease. The latter, however, is regarded as being rare. In the present case there was no physical evidence of chronic valvular disease. A murmur was heard at the base of the heart, but it was thought to be anæmic. The patient was a woman. She was receiving quinine and iron regularly, and the attacks of angina were subdued with Hoffman's anodyne in drachm doses, p. r. n.

INSOMNIA IN PHTHISIS.

In connection with this disease the above symptom is of very frequent occurrence, and not unfrequently demands a wide-awake physician to improvise means for its relief. Morphine is chiefly relied upon in this hospital. In certain cases—those in which great irritation of the throat is present—insufflation of morphia serves a most admirable purpose, both for relieving the irritation and subduing the cough. Consequent upon this, rest is also very often secured.

Various instruments have been devised for the purpose; but a simple instrument is made by attaching a quill to a piece of rubber tubing. The quill may be loaded with the quantity of morphia desirable to administer, carried to the back portion of the mouth, or into the pharynx, and then unloaded by blowing through the tubing attached.

TYPHOID FEVER.

In this case the eruption had been very well marked. The patient occupied a bed in the common ward, and no fears were entertained that the disease would be communicated to the patients occupying the same ward, or even adjoining beds. The patient was being supported by easily digested and fluid food, such as milk, etc. No special medicinal plan of treatment had been instituted.

ASTHMA.

The patient who was suffering from this affection had, as is ordinarily the case with this class of cases, tried an almost indefinite number of remedies in the hopes of obtaining relief; but no remedy had been found which gave such complete relief as morphia used hypodermically.

The condition of the man was sad indeed. When admitted he had been in the habit of receiving a hypodermic injection six times a day, containing from 10 to 15 drops of Magendie's solution, and almost every puncture had produced a troublesome abscess. He is now receiving eight drops four times a day.

His entire body is so completely covered with abscesses that a fair share of his time is occupied in fixing favorable locations for future punctures. One day this patient had suffered but very little from his asthma; but suffered equally as intensely from mental depression, believing himself to be one of the vilest of sinners, etc.

When his asthmatic symptoms returned, his mental anguish disappeared. It was remarked by one of the visiting physicians that this was a nervous development not very uncommonly met with in connection with asthma.

SYPHILIS AND PHTHISIS.

The question has been raised as to whether there is any connection between these two diseases in the relation of cause and effect. Some observers have arrived at the conclusion that such a relation does exist. Our attention was directed to the case as being one in which there was, at least, an apparent relation of cause and effect between the two affections.

The patient was first admitted to the surgical division because he was suffering from syphilis. For the syphilis he was there treated. When admitted, and previous to his admission, he was, to all appearances, a healthy man, with the exception of the syphilis; but since his admission to the hospital he has become the subject of phthisis, and has been transferred to the medical division. The question is, Is syphilis a cause of phthisis? Is it more liable to follow syphilis than many other diseases? Is it the syphilis, or the treatment usually instituted for its removal, that predisposes to phthisis? Has the question of hereditary or acquired taint, or a union of the two, anything to do with a satisfactory solution of the question?

REMOVAL OF FIVE INCHES OF SCIATIC NERVE.

This patient was a female, and had been admitted to the hospital on account of a tumor which was situated in the posterior portion of the left thigh, which was then giving her considerable inconvenience, although it had been first noticed more than a year.

It was decided to remove the tumor. When cut down upon, it was found to be intimately connected with the sciatic nerve, and to such an extent as to preclude all possibility of its removal without completely removing a large portion of the nerve. A halt was made, and a counsel held with regard to the proper method of procedure. It was decided to remove as much of the nerve as might be necessary to permit the removal of the tumor, and await the result. Accordingly, about five inches of the nerve were removed, the wound dressed, the patient placed in bed, and the result of the operation anxiously awaited. The patient was discharged from the hospital within three weeks, with but slight impairment of motion and sensation.

Progress of Medical Science.

PRURITUS HIEMALIS.—In the *Philadelphia Medical Times* of January 10th, Dr. Duhring describes a form of pruritus which does not appear to have been previously recognized. The affection is termed *pruritus hiemalis*, the attributive denoting its distinctive peculiarity. It is essentially a pruritus of cold or wintry weather, making its first appearance usually with the first decided change in weather between autumn and winter, and continuing for a variable length of time usually till the winter season is somewhat advanced, when it spontaneously subsides, often to recur the following year.

The affection is unaccompanied by any primary lesion apparent to the eye. Subsequently, however, the usual lesions due to scratching are commonly present. The disease is often confined to the lower extremities, its most favorite seats being the ankles, calves of the legs, popliteal spaces, and inner sides of the thighs. But other parts may be also affected. The itching is apt to be most intense at night, commencing immediately upon undressing, and persisting through a longer or shorter portion of the night.

Dr. Duhring has been unable to find any previous description of this disorder, and is of the opinion that it cannot be universally prevalent. No mention is made of it by the English or German writers. From a number of cases noted in hospital, and from his observations in private practice, Dr. D. thinks that about one-twentieth of the population in Philadelphia suffer during the season of its prevalence from this form of pruritus. It was found to occur quite independently of changes in clothing, usually made at this time, the degree of cleanliness of the individual, pediculi, or other external irritation. Its constant occurrence at the beginning of the cold weather suggests some ætiological connection.

The treatment recommended is only palliative. A warm bath on going to bed was found to somewhat allay the irritation, and when the skin became very irritable from scratching, much benefit resulted from use of the alkaline bath. In addition, all irritating articles of wearing-apparel are to be avoided, both by day and by night.

ACTION OF THE BROMIDE OF POTASSIUM ON THE SKIN.—Dr. Neumann, of Vienna, has recently had an opportunity of examining a portion of skin taken from a child that had an eruption upon its body, which appeared to have been produced by taking large doses of the bromide of potassium. Three hundred and sixty-one grains had been given to arrest convulsions, and after two hundred and fifty had been taken the peculiar rash appeared.

The result of microscopic examination showed that a series of anatomical changes had taken place in the skin, and especially in the glandular structures. The hair-follicles were chiefly affected, the hair-sacs and sweat-glands in a less degree. In the early stages there was an increase in the number of the cells lining the glands, and the interior was occupied by new cells, smegma, and pus. In more advanced stages the cells of the interior were mostly shrivelled, and the glands were dilated, while a layer of young and succulent cells covered the walls.

There was also an increase of cells in the cutis, enlargement of the papillæ, with an uneven surface of the epidermis; but these appearances appeared to be secondary to the above mentioned. The author concludes that the bromide of potassium is excreted through the glands, which are thereby thrown into a state of inflammation, which is accompanied by a development of new cell elements.—*Wien. Med. Woch.*, 49, 1873.

THE RELATIONS BETWEEN BACTERIA AND DISEASE.—Dr. Hiller, of Minden, has performed a large number of experiments upon the lower animals, with the view of determining the following questions: 1. Do bacteria possess the property of exciting inflammation when they are present in living tissue, or if in the blood do they cause fever? 2. Can bacteria multiply in living tissue? 3. Do they have the capacity of penetrating living organs?

Rabbits were first selected for experiment, and injections were made into the subcutaneous tissue, muscles, and veins. The fluid contained fungi in different grades of development and bacteria of different sorts, all obtained from various kinds of decomposing substances. The material in twenty-nine instances was injected under the skin, and into the muscles of the thigh, and in nine instances into either the ear or jugular vein. At the expiration of two months the animals were all alive, and never exhibited at any time symptoms of inflammation, abscess, or fever, or any other indications of general disturbance. It is true that on the first day following the injection the temperature rose, but the variation did not exceed two degrees (Fahr.) During the first forty-eight hours the temperature was noted every two hours, and then three or four times daily for the following six days. In three or four cases there was a small elevation in the skin the size of a barley-corn; but it seemed to be indolent and was gradually absorbed, and there was no further evidence of inflammation.

On the third day some portions of the skin were cut out, and after considerable search some masses of shrivelled bacteria were discovered; but in similar pieces that were examined on the eighth day, no bacteria could be found.

In cases where these fungi were injected into the vessels they were found during the first day, but even then they had no active independent motion, and the blood seemed in other respects normal. When blood was removed from the body, and as long as it was protected from drying, the bacteria multiplied very rapidly under the form of very simple round bodies. In the blood-currents of the body, though found at first, they gradually disappeared, and finally could not be detected at all. It would seem, too, that these investigations have furnished conclusive proof that bacteria, *of themselves*, do not cause septic infection, for not one of the animals that were employed had any symptoms of septicæmia, even after a lapse of three months.

As the result of further studies Dr. Hiller has reached the following conclusions:

1. The development and increase of these fungi can only take place in putrid matter, or in such as is incapable of any further independent action and holding the relation of inert matter to the living body. To this class of substances belong pus, mucus, serous exudations, extravasated blood, and urine.

2. It is true that occasionally in health, but generally where some diseased process is at work, as necrosis, inflammation, and formation of pus, vegetable organisms can find their way into the nutritive currents of the body. In cases where general disturbance of the system ensues, it should be regarded as the result of the products of inflammation and decomposition which have been absorbed with the bacteria.

3. The actual presence of bacteria in the vessels has no influence upon health. They neither multiply nor do they have any septic influence. At the moment of death, however, when the blood is no longer in motion, and when the vital energy has ceased, they may develop and multiply very rapidly. The same is true when they are caught up by the circulation and brought into immediate connection with any inert material, such as presents the conditions requisite for their growth, viz., moisture, warmth, and a nitrogenous character. This will account for their presence in pyæmic abscesses.

4. From these facts it would appear that the post-mortem appearances of bacteria in the body furnish no evidence that these organisms necessarily existed there during life. Their true life seems to commence only when the matter with which they are brought

into contact has ceased to live.—*Allg. Med. Central.-Ztg.*, 2, 1874.

FATTY DEGENERATION OF THE HEART IN WOMEN DYING OF SYNCOPE SOON AFTER DELIVERY.—In the 18th No. of Guy's Hospital Reports for 1873, Dr. Phillips gives his experience in five cases of sudden death in puerperal women. In almost every instance there had been some irregularity in the action of the heart either during confinement or pregnancy. Cases of hemorrhage from placenta prævia were carefully excluded. The ages of the patients fell between 27 and 40, all were multiparæ, and death was sudden and painless. They had sat up in bed a few hours after delivery, when syncope ensued, from which they never rallied. Some had lost a slight amount of blood during delivery, and others had complained of shortness of breath, or had cyanotic discoloration of the face. At the post-mortem examination two were found to have old pleuritic adhesions, one had emphysema, but in the others the lungs were unaffected. It was noticeable that the cavities of the heart were free from clots; in fact, they were either empty or contained only a small amount of fluid-blood. The microscope, however, showed that in each instance there was fatty degeneration of the muscular tissue of the heart.—*Schmidt's Jahr.*, 9, 1873.

GASTROTOMY FOR UTERINE TUMORS.—M. Boinet (*Gaz. Hebdom.*, Nos. 8. 13, 16, 23, 28 and 29) endeavors to show that this operation should be rejected whenever the fibrous tumor is sessile, and especially when it is necessary to remove the uterus wholly or in part. The following are the conclusions to be drawn from this long memoir: In fourteen gastrotomies, performed by surgeons who thought they had to deal with ovarian cysts, fibrous tumors, more or less attacked by the bistoury or trocar, were left *in situ*, and the operation was abandoned. In spite of this nine women recovered; five died. Of twenty-three cases of extirpation of fibrous or fibro-cystic tumors, multilocular cysts, the uterus being left in its place, we must distinguish the cases of pedunculated tumors, which alone gave eight cures and five deaths, from the cases of sessile or interstitial tumors, ten of which gave ten deaths. Finally, forty-two total extirpations of tumor and womb gave thirty-two deaths and ten recoveries. In these three categories hemorrhage is the most frequent cause of death; and next to that peritonitis. Boinet concludes by giving practical advice concerning the performance of the operation, which does not differ much from ovariotomy.—*Br. Med. Jour.*, Jan. 3.

EXTIRPATION OF THE ENTIRE LARYNX.—This operation, which is probably the first that has ever been performed by any surgeon, was successfully carried out by Billroth on the 31st of December, 1873.

The patient, a man 40 years of age, had repeatedly consulted Dr. Stoerk, of Vienna, for cancerous growths within the larynx. By the aid of the laryngoscope portions were removed from time to time, and the patient was greatly relieved. In the commencement of last November the mass had extended so rapidly that further operations from above were regarded as useless, and after consultation it was decided to open the larynx from without. The cavity was exposed, the growths removed, and the base thoroughly cauterized.

The patient recovered rapidly, and for a time the prospects were encouraging. Before, however, a month had elapsed, new growths were detected by the laryngoscope, and suffocative attacks became so frequent that all further operative procedure was abandoned as hopeless, and the canula was introduced with the hopes of prolonging the patient's life a few months. At this time the vocal cords were entirely destroyed, and the larynx was entirely filled with cancerous masses. As the glands, however, were not involved, the possibility of successfully removing the entire larynx then suggested itself to Billroth, and he felt himself further justified by the fact that experiments made upon dogs by Czerny had proved the practicability of the operation. It was accordingly done, and at the latest dates the patient was doing well. He breathes easily through a canula, which was passed into the trachea. There had been little fever, and the wound was contracting and healing favorably.

If the case continues to progress well, it is proposed to substitute a larynx of vulcanized rubber in place of the one removed.—*Wien. Med. Woch.*, 2, 1874.

THE MARSH PLANT.—Dr. John Bartlett recently read before the Chicago Society of Physicians and Surgeons an elaborate paper entitled, "*On a Marsh Plant from the Mississippi Ague Bottoms, supposed to be kindred to the Gemiasma of Salsbury, with a consideration of its Genetic Relations to Malarial Diseases.*" Having observed a remarkable coincidence between the flourishing of this plant and malarial prevalence, Dr. Bartlett has taken the pains to study the character and development of the growth with considerable minuteness, and has presented the results of his investigations in the above paper.

The plant was found flourishing upon marshy soil, or in regions from which the water had recently subsided. It appears as a bulbous head or globe, of about one-twentieth of an inch in diameter, surmounting a slender stem or root, which is branched at its lower extremity. The globe consists of an outer, green, cellular layer, resting upon an inner, whitish layer, similar to a basement membrane, enclosing a central cavity filled with clear fluid. The root corresponds in structure with the inner layer of the globe, with which it appears continuous, and has a central canal. In process of growth the upper hemisphere of the globe collapses, making it cup-shaped. Upon the cup-shaped plants, as well as upon the soil and various objects adjacent to the plants, there now appears a sort of whitish, dust-like deposit. In this deposit, according to Bartlett, exist the germs of malarial diseases. The deposit is composed of "germinal atoms," "crystalline substance," "threads and filaments," "crystalloid bodies," etc., which remain to be described. According to the botanists, Profs. Babcock and Munroe, to whom specimens were submitted, this deposit-appearance belongs to some development entirely distinct from the marsh plant, probably to some fungus parasitic to it. (According to these gentlemen the marsh plant is the *Hygrogastrum* of *Rabenhorst*, or the *Botrydium* of the micrographic dictionary.) Dr. Bartlett, however, finds in the deposit evidence of another phase in the marsh plant's existence. The connection is traced as follows: After the globe of the plant collapses, the cells of its outer layer elongate, burst, and give exit to small cells or spores, resembling, except in size, the parent cell. These spores next disintegrate, with the production, as they disappear, of very minute particles (less than 1-15000 of an inch), which are termed "germinal atoms." These are supposed to answer to Salsbury's "spores." The "germinal atoms" appear to have diverse destinies. Some combine in threads, which grow (in a somewhat remarkable manner) till myceliæ are produced, while others agglomerate in little crystalloid masses. Meantime, from the surface of the globe, as well as from

the crystalloid bodies, shoot up little acicular crystals, surmounted by minute glass-like bulbs. These, it is surmised, furnish the pollen. The next step is the appearance upon the crystalloid bodies of little green "points of verdification," which finally result in the production of cells or spores resembling the cells of the original plant. The cycle of development is thus completed.

During the growth of the marsh plant the atmosphere is supposed to be loaded with the germinal atoms. A glass slide suspended over the plant is soon studded with multitudes of these particles, and it is probable that they may easily be borne through the air to remote distances. A correspondence between ague and "ague plants," as to localities, etc., is shown in a tabular form.

During the pursuance of his investigations, being constantly exposed to the malarial influence, the author found the germinal particles abundant in his blood, and suffered simultaneously with symptoms of remittent fever. In the urine the atoms appeared after five minutes, and rapidly formed crystalloid bodies and crystalline filaments.

Considerable space is devoted to a consideration of the objections urged by Dr. Horatio Wood and others, to Salsbury's germinal theory. Dr. Bartlett thinks that many of these lose their force in view of the new facts which he has elicited. In conclusion, the writer desires "such co-operation from other observers as may insure an early solution of the question at issue."—*The Chicago Med. Jour.*, January, 1874.

OVARIOTOMY.—Dr. George A. Mursick reports a case of ovariotomy, in the *Am. Jour. of the Med. Sciences*, Jan., 1874, which presents the following points of practical interest: 1. The removal of the tumor by enucleation. 2. The establishment of free drainage per vaginam by the seton. 3. The administration of medicine by subcutaneous injection, in consequence of excessive gastric irritability. 4. The support of the patient by nutritive enemata. 5. The value of quinia in the prevention and cure of septicæmia.

The tumor was multilocular and proliferous, and was largely adherent posteriorly and in the region of the pelvis. After evacuating seven cysts the tumor was removed by detaching it from its adhesions and vascular investment by means of the fingers and the handle of a scalpel. No hemorrhage occurred and no ligatures were required. To establish a free drainage Douglas's cul-de-sac was punctured and several strands of ligature silk were passed into the abdominal cavity. The ends which emerged at the vagina and at the lower angle of the abdominal wound were tied together. On the third day the condition becoming bad with retching and vomiting, so that neither food nor medicine could be retained in the stomach, rectal enemata were resorted to, and four grains of sulphate of quinine, with one quarter of a grain of sulphate of morphia, were injected subcutaneously every six hours. Improvement began at the beginning of the second week, with ultimate complete recovery.

ARTICLES IN OUR EXCHANGES.

ANATOMY AND PHYSIOLOGY.

Nerve-tissue. JAS. B. BAIRD. *Atlanta Med. and Surg. Jour.*, xi., 10.

The physiology of the sympathetic nerve. J. E. FINCH. *Northwestern Med. and Surg. Jour.*, iv., 8.

The distribution of nerves in reference to neurotomy. HENRY C. CHAPMAN. *Phila. Med. Times*, iv., 117.

Supernumerary fingers and toes. CHARLES W. BROWN. *Ibid.*, 118.

The structure and action of striated muscular fibre. THOMAS DWIGHT, Jr. From the proceedings of the Boston Soc. of Natural History, vol. xvi., Nov. 5th, 1873.

SURGERY.

On the difficulties attending the diagnosis of aneurism, being a contribution to surgical diagnosis and to medical jurisprudence. STEPHEN SMITH. *Am. Jour. of the Med. Sciences*, Jan., 1874.

The present state of our knowledge of the pathogenesis of tumors. GROSS. *Ibid.*

Some points in the mechanism of the cranium considered with reference to the causation of fracture. HARRISON ALLEN. *Ibid.*

Some contributions to operative surgery. JOS. C. HUTCHISON. *Ibid.*

Case of primary excision of the ankle-joint. H. G. LANDIS. *Ibid.*

Exophthalmic goitre successfully treated by the iodobromide of calcium. C. R. GUPTILL. *Ibid.*

Immediate compression of the common iliac artery for the prevention of hemorrhage during operations upon the lower extremity, etc. FRANK WOODBURY. *Ibid.*

Case of double aneurism. HOSPITAL REPORT. *Can. Med. and Surg. Jour.*, xii., 7.

Case of multiple fracture of the arm. *Ibid.*

Fracture of the inferior maxillary and amaurosis of left eye. J. P. WALL. *Charl. Med. Jour. and Rev. U. S.*, i., 4.

Surgery in country practice. T. S. MIMS. *Ibid.*

Traumatic aneurism of neck and ligation of primitive carotid. R. W. GIBBES. *Ibid.*

Skin-grafting. E. LEROY WEMPLE. *Pac. Med. and Surg. Jour.*, vii., 8.

Hydrocele of the tunica vaginalis. LUCIUS MCGUIRE. *Ibid.*

Refracture of femur. L. L. DOW. *Ibid.*

Cases of incarcerated hernia. H. H. TOLAND. *Western Lancet*, iii., 1.

Cystitis. I. B. WOODSON. *Ibid.*

Hernia of the bladder. F. LESSING. *Northwestern Med. and Surg. Jour.*, iv., 8.

A case of croup; tracheotomy. C. E. SMITH. *Ibid.*

Staphylorraphy and uranoplasty. JOHN E. OWENS. *Chic. Med Jour.*, xxxi., 2.

Dislocation of the humerus. EDWIN POWELL. *Med. Examiner*, xv., 1.

Abscess within the cavity of the thorax, caused by gunshot wound. W. L. APPLEY. *The Med. and Surg. Reporter*, 882, 1874.

Case of pistol-shot wound. J. D. RANKIN. *The Texas Med. Jour.*, i., 10.

PATHOLOGY AND PRACTICE OF MEDICINE.

On thrombosis of the cerebral veins and sinuses of the dura mater. JOHN A. LIDELL. *Am. Jour. of the Med. Sciences*, Jan., 1874.

Cynopuon laryngis; thyroiditis with blue suppuration. SIR G. DUNCAN GIBB. *Can. Med. and Surg. Jour.*, xii., 7.

Case of jaundice with atrophy of the liver, of four weeks' duration;—death. HOSPITAL REPORT. *Ibid.*

Epidemic yellow fever in Montgomery, Ala., summer of 1873. R. F. MICHEL. *Char. Med. Jour. and Rev., N. S.* i., 4.

Pathologico-therapeutic studies of "catarrhal pneumonia." J. F. M. GEDDINGS. *Ibid.*

Hints on the pathology of dyspepsia, etc. JOHN M. TURNER. *Ibid.*

Continuation of replies to observations on treatment of yellow fever, made to Prof. Jos. Jones, M.D. By SOUTHERN PHYSICIANS. *Ibid.*

Experiments on animals with blood and black vomit from yellow-fever cases. JOS. JONES. *Ibid.*

Geographical distribution of yellow fever in the United States. J. M. TONER. *Ibid.*

The prevention of pulmonary consumption. O. M. WOZENCROFT. *Pac. Med. and Surg. Jour.*, vii., 8.

Epidemic fevers of California. P. B. M. MILLER. *Ibid.*

Croup. WM. G. GUSTIN. *The Peninsular Jour. of Med.*, x., 1.

Pneumonia. P. STEWART. *Ibid.*

Chronic disease of the spinal cord. N. S. DAVIS. *The Med. Examiner*, xv., 1.

Invermination associated with measles. F. K. BAILEY. *Ibid.*

On fatty degeneration of the heart. WILLIAM PEPPER *The Med. and Surg. Reporter*, 881, 1874.

Fox on diseases of the stomach. 16 pages. *The Med. News and Library*, xxxii., 373.

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Description of a new forceps. ALEX. MCBRIDE. *Am. Journal of the Med. Sciences*, January, 1874.

Ovarian tumor removed by enucleation; drainage through the Douglas cul-de-sac, etc.; recovery. GEO. A. MURSICK. *Ibid.*

Abortion—large quantity of jelly. A. J. SHAFFER. *Atlanta Med. and Surg. Jour.*, xi., 10.

A case of embryulcy. Q. C. SMITH. *Pac. Med. and Surg. Jour.*, vii., 8.

Case of albuminuria attending pregnancy. T. H. PINKERTON. *Western Lancet*, iii., 1.

Ovariotomy and ovarian disease. A. J. MILES. *Cincin. Med. News*, iii., 1.

Nervous disorder of women. T. H. STUDDIFORD. *Ibid.*

Annual report of the section on obstetrics and diseases of women and children of the Chic. Soc. of Phys. and Surgs. A. REEVES JACKSON. *Chig. Med. Jour.*, xxxi., 2.

The use of forceps in labor. W. R. MARSH. *Peninsular Jour. of Med.*, x., 1.

Puerperal eclampsia. A. HURD. *The Clinic*, vi., 3–4.

Rupture of the uterus. JAS. F. SULLIVAN. *Ibid.*, 3.

A case in which both legs were amputated in utero. GERALD O'FARRELL. *Phila. Med. Times*, iv., 118.

Practical hints for the treatment and for the prevention of uterine disorders. Continuation. WILLIAM GOODELL. *Med. and Surg. Reporter*, 881–2, 1874.

Cases of intra-uterine and fæcal tumors giving rise to menorrhagia. JOHN HALL DAVIS. *The Obstet. Jour. of Great Brit. and Ireland*, 1874.

Some remarks on uterine hemorrhage during the puerperal period. T. SNOW BECK. *Ibid.*

On the dangers of dentition. JAMES FINLAYSON. *Ibid.*

Injection of perchloride of iron in post-partum hemorrhage. R. BARNES. *Ibid.*

Anatomy of the placenta. J. BRAXTON HICKS. *Ibid.*

Two cases of endometritis deciduali. WILLIAM F. JENKS. *Ibid.* American Supplement.

Evidences of life in a newly-delivered child. WM. B. ATKINSON. *The Jour. of Mat. Med.*, January, 1874.

NERVOUS DISEASES.

Spinal congestion and locomotor ataxia. GEORGE M. BEARD. *Phila. Med. Times*, iv, 117–118.

Case of hydrophobia. JOHN KNIGHT. *Ibid.*, 117.

Curiosities of cough, continued. L. ELSBERG. *Ibid.*

Pathology of insanity. JOHN P. GRAY. *American Jour. of Insanity*, January, 1874.

Two cases of paralysis. DANIEL H. KITCHEN. *Ibid.*

Phosphorus in insanity. WILLIS E. FORD. *Ibid.*

Hæmatoma auris—recovery. E. H. VAN DEUSEN. *Ibid.*

Clinical observations on the dementia and hemiplegia of syphilis. M. H. HENRY. *Ibid.*

On the perivascular spaces in the nervous centres. THEODORE DEECKE. *Ibid.*

SYPHILIS AND DERMATOLOGY.

On some sources of syphilitic infection. JAMES NEVINS HYDE. *Am. Jour. of the Med. Sciences*, January, 1874.

On syphilitic membranoid occlusion of the rima glottidis. LOUIS ELSBERG. *Am. Jour. of Syph. and Derm.*, v., 1.

Discussion on the prevention of syphilis with reference to prostitution, at the congress held at Vienna, August, 1873, with remarks. M. H. HENRY. *Ibid.*

Pruritus hiemalis. JULIO J. LAMADRID. *Phila. Med. Times*, iv., 118.

OPHTHALMOLOGY AND OTOLOGY.

An endeavor to show that insufficiency of the internal recti muscles and myopia have been erroneously associated; and that the muscular asthenopia of myopia is not the result of such insufficiency, but of the anomally of refraction. SAMUEL THEOBALD. *Am. Journ. of the Med. Sci.*, Jan., 1874.

A new modification of the ophthalmoscope. ED. G. LORING. *Ibid.*

Embolism of the central artery of the retina in both eyes; death. OLOF PAGE. *Ibid.*

Granulation of ten years' standing cured by canthotomy. N. J. MARTINACHE. *Western Lancet*, iii., 1.

The causes of granular conjunctivitis in the northwest. O. B. BULL. *Northwestern Med. and Surg. Jour.*, iv., 8.

Gonorrhœal conjunctivitis. A. G. SINCLAIR. *The Peninsular Jour. of Med.*, x., 1.

MATERIA MEDICA, THERAPEUTICS, AND TOXICOLOGY.

On the use of arsenic for the relief of asthma. COMEGYS PAUL. *Amer. Jour. of the Med. Sciences*, Jan., 1874.

On some of the uses of the knee-elbow position. F. A. BURRALL. *Ibid.*

Poisoning by rhus toxicodendron. WM. H. DEWITT. *Ibid.*

Treatment of poisoning by rhus toxicodendron with linseed oil and lime-water. A. C. MATHESON. *Ibid.*

The use of opium in obstetrics. HIRAM CARSON. *The Med. and Surg. Reporter*, 882, 1874.

The therapeutics of gelseminum. W. C. HULL. *Ibid.*

Asclepias incarnata. JOSEPH BATES. *The Jour. of Mat. Med.*, January, 1874.

Liatris spicata.—*Ibid.*

Galvano-therapeutics. Reprint of report made to Ill. State Med. Soc. for 1873. DAVID PRINCE.

MISCELLANEOUS.

On the guiacum process for the detection of blood as a valuable aid in distinguishing nucleated from non-nucleated red blood-disks. R. M. BERTOLET. *Amer. Jour. of the Medical Sciences*, January, 1874.

Law of registration. C. B. NOTTINGHAM. *Atlanta Med. and Surg. Jour.*, xi., 10.

Transactions of the Chicago Society of Physicians and Surgeons. Meeting of Dec. 8, 1873. REPORT. *Ibid.*

Paper read before the Rush Co. Medical Association. JOHN MOFFIT. *Ind. Jour. of Med.*, iv., 9.

Proceedings of the Grant County Medical Society, at its twenty-fifth anniversary. REPORT. *Ibid.*

Proceedings of Wayne County Medical Society, Union Medical Society, and the Southern Michigan Medical Association Reports. *Peninsular Jour. of Medicine.*

On expert testimony in judicial proceedings. JOHN ORDRONAUX. *Am. Jour. of Insanity*, January, 1874.

Transactions of the South Carolina Med. Association, Ann. Sess., 1873.

The origin and propagation of disease. JOHN C. DALTON. Anniversary Discourse before the N. Y. Academy of Medicine, November 20, 1873. Published by the Academy.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, March 2, 1874.

THE EFFICIENCY OF THE ARMY MEDICAL STAFF.

We understand that the Military Committee of Congress are now perfecting a bill to reduce the army by seven regiments. This fact is a significant one to every medical man who has an interest in the well-being and prosperity of the Medical Staff. The question which it suggests is, What will be done with army surgeons? what changes will be made corresponding to this proposed reduction of the line, and what effect will they have upon the usefulness of our arm of the service?

In any event, conjecture of what may be, can be the only point upon which can turn a suggestion as to what should be. We may presume that the medical staff will with the others come in for its share of reduction, and having presumed thus much, we take another step by asking ourselves the questions, how can this be done, and why should it be done?

The present number of army medical officers available for duty at military posts may be estimated in round numbers at one hundred and thirty, in addition to which there are about one hundred and forty-five contract surgeons, making in all about two hundred and seventy-five physicians employed, besides medical directors. In the first place the scarcity of medical officers is a deplorable fact the proofs of which have been repeatedly given by references to the reports of the Surgeon-General. Why this lack of numbers exists we do not now propose to explain, but shall be content to make the assertion that such is the case. Even with the employment of physicians by contract there is a bare sufficiency of medical men for the care of the established military posts. The number of men in any given post does not settle the question whether there shall or shall not be an army surgeon to care for them; the reduction of the actual force forms no element in the discussion of the practicability of reducing the existing medical staff; five men on a post have as much right to be cared for in a medical way as a thousand. So long, then, as the military posts remain the same, the medical staff should continue the same in the number of its members. If it be decided that the existing medical posts can be reduced, the committee may then take upon itself the responsibility of making an equivalent reduction of the medical corps, and not till then. If, for instance, one-sixth of the posts are abandoned, then one-sixth of the surgeons could be dispensed with, or forty-six, leaving two hundred and thirty required. Even if we were to allow of the small reduction of one-tenth the number of posts, which, according to our best military authorities, is not an allowable estimate, the medical corps of the army, if it were full, would not be sufficient.

Even if this reduction of the number of military posts were admissible, we contend that the medical staff should not be reduced. There are two corps in the army which can do good service to the government and the country in time of peace in work not directly connected with the army; we refer to the Corps of Engineers and Surgeons. Of the special services of the latter, in this respect, we are best prepared to speak. The surest promise of what can be done, is the fact of what has been done by army surgeons, even while attending to their required duties. In this connection we need not go beyond a reference to the contributions of the valuable specimens to the army medical museum which represent an aggregate of gratuitous work on the part of the army medical officers as unprecedented in amount as it is invaluable in scientific interest. But this is not an isolated instance of what can be done by competent men, and if such can be accomplished as incidental to their legitimate duties, what may we not expect from the same class of men when they have the requisites of encouragement, and fuller opportunities to cultivate the special talent which they may possess. We have individual examples of what can be accomplished when suitable and special details are made for scientific work. The brilliant results growing out of the study of the microscope and the demonstration of the utility of micro-photography as a means of truthfully disseminating accurate scientific data have, in connection with the work in the army museum, accomplished wonders for American medicine. The masterly compilation of the Medical and Surgical History of the War is another proof of the wisdom of utilizing the medical staff; and the library of the Surgeon-General's office, destined to be the national medical library, is still another instance of what may be done in another direction by a talented and indefatigable army officer. The gentlemen who have performed these labors belong to a class of men of whom the American medical profession are especially proud, and who in their respective spheres are capable

of conferring a lasting benefit upon our science everywhere. There are many others who could work in other special fields with equal credit to themselves, with equal benefit to medicine, and with equal profit to the Government.

We do not, however, wish to go to extremes in urging claims of special scientific work to the exclusion of the legitimate army duties, as such would not be strictly in keeping with the direct requirements of the service, but merely desire to show what may be done by army surgeons in times of peace, and how that portion of their time not consumed in the routine of strictly official duties, can be utilized by an intelligent and discriminative direction of their special tastes in the different departments of scientific investigations.

Not only should the Government retain such men in service, but should give them every encouragement. If it fails to do so it shoulders the heavy responsibility of denying to scientific medicine the opportunity of working up the vast stores of material now in its possession, of systematizing accumulated experience, and of obtaining and distributing information of incalculable benefit to suffering humanity. The good which will obtain from such labors will be only proportionate to the enormous scale on which they can be carried on. The profession, it is true, can alone form an estimate of the ultimate results of such work, and can alone judge of its necessity, but it cannot in justice to its own interests be content in merely hoping for the best. The time has come when its influence must be exerted in the proper direction to secure the desired end. Unless there be some better reason than the saving of a few dollars and cents, or the actual reduction of the number of our military posts, the medical force should not only remain as it is, but every effort should be made and every influence exerted with the different members of Congress to increase the efficiency of the staff. In no better way could the latter be accomplished than by favoring the Army Rank Bill founded on the memorial of the American Medical Association. The contemplation of the possibility of success is by no means a forlorn hope if there be a determination on the part of the profession throughout the country equal to that which characterized its successful working for the passage of the Naval Staff Rank bill two years ago. The army surgeons only ask that the equivalent rank to that already possessed by the navy surgeons be given them, and if there is any weight in the argument of precedence, the result, in spite of the cry for economy, would seem to be a foregone conclusion.

THE EXPOSURE OF QUACKERY.

We have repeatedly called the attention of the secular press to the bad influences which may arise from the admission of quack advertisements in their columns—a practice which, on its face, appears, to the uninitiated at least, to give the weight of an authority to the statements therein contained. Very many of these periodicals go still further, and in the very columns devoted to morals and religion have the audacity to insert bogus letters of endorsement for these pretenders, and even with an editorial recommendation call more particular attention to the item. In view of this deplorable state of affairs it is certainly refreshing and encouraging to know that there is at least one respectable journal in New York, *The American Agriculturist*, which not only dares to reject quack advertisements, but which takes the pains to expose quackery in every shape. One of the fraternity of pretenders, the proprietor of the so-called "Golden Remedies," whose business was injured thereby, recently brought a suit against the publishers of that journal, claiming twenty-five thousand dollars damages. The defence set up was to the effect that the remedies were worthless; that the plaintiff was not an educated medical man; that he was a quack, a swindler, and an impostor. In the examination it was shown that the plaintiff's title was only an assumed one. The said plaintiff refused, on trial, to state the ingredients of the different compounds further than that they were secret compounds possessing great medicinal virtues.

A motion was made before a Judge at Chambers, by defendants' counsel, to strike out the complaint, which was granted, and the suit vacated with costs. An appeal was then made to the General Term, where the decision was maintained. Judge Davis, in delivering an opinion, made the following important statement:

"It is impossible to read the vulgar, and in many respects shameful, assertions and instructions that accompany the compounds of plaintiff, without being struck with the vileness of the impostures. That he can bring an action of libel for injury alleged to be done to his trade in his medicines by denouncing them as arrant quackery, and at the same time protect himself against exposure by claiming them to be valuable secrets, is a proposition that cannot be maintained. Byrn *vs.* Judd, 11 Abbott, New Series; 11 New York, 347, New Series. In the laudable exposure of such 'humbugs' as the pretended medicine of plaintiff and others, the defendants take upon themselves great risks, and subject themselves to the annoyance of suits; but I think they are not exposed to any danger that courts will interpose any shield for the protection of parties guilty of fraud and deception of the public. If the plaintiff did not choose to try the question of the true character of his 'Golden Remedies,' he should have kept out of a court of justice."

The American Agriculturist deserves the thanks of the profession and the public for the stand which it has taken in this matter, and we hope it will be encouraged to proceed in its good work, and ever be an example of what determination in the cause of truth and justice can accomplish. One explanation for the fearlessness of the attacks upon quackery by this journal is, that it has upon its staff a thoroughly educated medical man, who is determined to discharge his responsible

duties to his many readers. It would be well if every responsible paper had such a conscientious worker upon its staff, one who could at least be allowed to sit in judgment upon the merits of all quack advertisements which might be offered. Until some such plan can be adopted the press at large can never free itself from the most pernicious of all systems of humbuggery.

Reviews and Notices of Books.

DISEASES OF THE STOMACH. By WILSON FOX, M.D. Third Edition of the "Diagnosis and Treatment of Dyspepsia." Revised and Enlarged. Macmillan and Co., London and New York.

WE never open a book of this kind without a feeling of regret at the existence of two incompatible necessities of medical life. The first is the necessity for analyzing phenomena to their ultimate elements, and of establishing on an exact, incontrovertible basis, by means of personal observation and experiment, every assertion that may be made in regard to disease or therapeutics. With this exclusively in mind, no author would pretend to publish anything, except in positive elucidation of some of the many pathological conditions that for years have been described, discussed, and classified, in medical literature, and whose history yet remains incomplete. Could every one remember all that had been written on diseases of the stomach, even within the last twenty years, he would have no occasion to consult this attractive little volume by Dr. Fox, for in that he will find little which has not been said before, somewhere, and in no inaccessible locality. But the second necessity of the medical practitioner, and which too often becomes the first, is that of possessing, in compact and portable form, the statement of the principal facts and doctrines, by which he must be guided in his daily work, and for such purpose books like these, appearing in slightly modified form every few years, are really useful, although their use is limited, and their indications have often been fulfilled before. The classification of subjects in Dr. Fox's volume is good. The first part is devoted to a description and analysis of the principal symptoms that occur in the course of stomach affections, as flatulence, acidity, pain, vomiting, etc. In relation to the first, the author discusses and rejects the theory of secretion of gas from the blood, either into the stomach or intestines, although this theory is still admitted by Béclard. He ascribes the presence of an excessive quantity of gas in the stomach to one of two causes,—to the ingestion of air, by relaxation of the cardiac orifice; or to the fermentation of solid and liquid substances whose digestion has been arrested. He describes rather cursorily the consequences of the tympanitic distension of the stomach, but omits to mention the more alarming effects, as syncope, or even sudden death, which may follow with excessive distention, especially in patients whose heart is in any way diseased. The mechanism of vomiting is very well discussed. In regard to epigastric pain, the writer dwells on the importance of distinguishing between pain seated in the stomach or myalgia. Briquet long ago pointed out the frequence of the latter in hysterical affections. The distinction may often be made by pressing upon the insertion of the recti or oblique abdominis, when the pain elicited is as severe as at the epigastrium. Romberg's opinion is quoted, that the real neuralgia of the stomach which is accompanied by a sense of faintness, depends on the solar plexus, while neuralgia of the vagus is rather marked by perversions of appetite. But of all aberrations from the healthy functions of the stomach, indigestion is the most important, and is manifested both by phenomena which are the primary results of imperfect changes in food, and by others which are the more remote effects of these. It is these latter which so frequently give rise to errors in diagnosis,—and they are very well classified by the author into—

Disturbances of the nervous system, including neuralgia, muscular weakness, headache, loss of memory, hypochondriasis, hysteria, even convulsions, etc.

Alterations in urinary secretions, with excess of water or of urea, lateritious sediments, variations of reaction of abnormal contents, as albumen, sugar, cystine, oxalates.

Disturbances in generative organs, as perverted menstruation, leucorrhœa in the female, impotence, spermatorrhœa in the male.

Alterations in the skin, febrile heat or suppression of perspiration, coldness, earthy yellow tint,—various eruptions, as erythema, ecynenia, herpes, acne impetigo, lichen, urticaria.

Alterations in circulation, palpitations, cardiac intermittences, excitability of pulse.

Alterations in respiration, dyspnœa, cough, asthma.

Alterations in general nutrition, anæmia, emaciation, grayness or loss of hair, caries of teeth, incurvation of nails, inflammation of mucous membranes, development of hereditary tendencies to gout, rheumatism, venal, or pulmonary affections. This part is one of the most useful in the book.

The second part of the book is devoted to the consideration of special diseases of the stomach. The several chapters are concisely and clearly written,—offering nothing especially new or original, but resuming very well what has been already said or demonstrated. Separate chapters are consecrated to atonic dyspepsia, neuroses, acute catarrh, chronic catarrh, ulcer, cancer, hemorrhage, hypertrophy, stricture of cardiac or pyloric orifices, dilatation, softening, perforation, rupture, tubercle. The distinctions between atonic dyspepsia and the various neuroses of the stomach are very well exposed,—the author premising at the outset that many impairments of digestion due to nervous derangement really present no symptoms but those of atonic dyspepsia. The erosions of mucous membrane, characteristic of chronic catarrh, are well described, and their microscopical appearances figured in two lithographic plates. The separate chapter devoted to hemorrhage is superfluous, since, as the author remarks, this is only a symptom of some pathological condition otherwise classified. The chapter on cancer alone contains a list of bibliographical references and some statistics in regard to frequency of the disease. The pathological anatomy is, however, rather superficial, and the affirmation that cancer, "whether schirrous or medullary, almost invariably originates in the submucous tissue," must be considered as much too absolute in the presence of the still-pending controversy on its epithelial origin. (See Thiersch, also the memoir of Walderger, *Arch. Virch.*, June, 1872.)

A SYSTEM OF MIDWIFERY, INCLUDING THE DISEASES OF PREGNANCY AND THE PUERPERAL STATE. By WILLIAM LEISHMAN, M.D., Professor of Midwifery in the University of Glasgow. Late Vice-President of the London Obstetrical Society, etc., etc., etc. With 182 illustrations. Philadelphia: Henry C. Lea. 1873. 8vo, pp. 715.

THIS handsome volume was given to the profession some three months since, and has received extended

and favorable notice in several of the leading journals.

It proposes to offer to practitioners and students "A Complete System of the Midwifery of the Present Day," and well redeems the promise.

Where so much is attempted in the compass of a single volume, it is unavoidable that some topics should be rather cursorily treated.

Dr. Leishman's name has been associated with researches into the mechanism of labor, by a monograph published in 1864, in which he controverted, ably, some of Naegele's classical propositions upon that subject.

His views have since received the support of distinguished British obstetricians, and are fully elaborated in the present volume.

In all that relates to the subject of labor, the teaching is admirably clear, concise, and practical, representing not alone British practice, but the contributions of Continental and American schools.

The chapters upon the Development of the Ovum give but an outline of the subject, and do not contain some of the most recent studies in embryology.

From the chapter on the Induction of Premature Labor, otherwise excellent, we notice the omission of the use of the elastic catheter, and the Molesworth dilator, which are in favor among us.

From the discussion of inversion of the uterus, we infer that the author would condemn to ablation some of the cases of long standing, which have been successfully reduced by American operators.

It is several years since we have had a "system" of midwifery from British sources. The accumulated observations of this period are given us in the present volume, which is, therefore, as timely as it is valuable. We think it very well suited for a text-book, as well as a manual of reference, to which its complete index conduces.

The typography is very fair, and the illustrations abundant, and, in some cases, new to English readers.

Reports of Societies.

NEW YORK JOURNAL AND LIBRARY ASSOCIATION.

Stated Meeting, November 28, 1873.

DR. J. C. PETERS, PRESIDENT, in the Chair.

DISCUSSION ON DR. LINCOLN'S PAPER.

DR. POST was of the opinion that when the effusion on the mucous membrane was serous, scarification was sufficient to give relief; but when the material was of a plastic nature, tracheotomy might be called for, and only then.

DR. ROBINSON had employed scarification when œdema in the larynx was present, and obtained no relief. He does not believe that any benefit is to be derived from it, because the exudation is generally plastic, and not serous. He was opposed to the use of nitrate of silver, because it was liable to provoke spasm of the glottis, and spasm of the glottis, in the last stages of the affection, might of itself prove fatal, although he could bring no facts to substantiate this in a positive way. If it is used for its astringent effects simply, it is no better than many other astringents. He doubted very much whether any local applications were of benefit in the advanced stages, unless it was morphine. That may lessen pain somewhat. He believed that phthisical influences should be regarded as the foundation of the disease, and that tubercles might have been found in most cases if close examination had been made.

DR. BURRALL inquired whether reference was made to applications of nitrate of silver by means of a brush or by spray, for the effects are entirely different. Comparatively weak solutions will produce irritation when applied with a brush, whereas very strong solutions can be used by spray and produce but comparatively little irritation.

DR. ROBINSON replied that he had reference more particularly to the use of the brush. In the spray we use nothing like a strong solution as a general thing.

DR. FARNHAM has used solution of nitrate of silver from 5–10 grs. to the ounce with brush or sponge, before spray was introduced, and never without producing severe spasm. He has used with the spray solutions varying from 5 to 480 grs. to the ounce, without producing anything approaching to the spasm produced by weaker solutions applied with sponge or brush.

DR. CARO mentioned two remedies which he had employed with good results, which had not been mentioned. Oil of turpentine, in œdema of larynx particularly, is more serviceable than scarification; muriate of ammonia to relieve an irritable condition of the throat.

DR. LINCOLN said that it was better to employ strong rather than weak solutions of nitrate of silver, if pain is referred to. Strong solutions are much less painful.

Spray of nitrate of silver under high pressure affords a means of application which in point of convenience surpasses all others. With the instrument designed by Dr. Saas, a pressure of 30 or 35 lbs. to the sq. inch can be easily managed. The nitrate of silver acts upon the albuminous part of the membrane and coagulates it. Chloride of gold and acid nitrate of mercury act to destroy the tissues, and should be applied for specific purposes and with the greatest care.

DR. ROBINSON was certain that a strong solution of nitrate of silver would produce sloughing of the tissues, the same as acid nitrate of mercury, and that the objection to one was equally applicable to the other.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, Monday Evening, January 25, 1874.

THE PRESIDENT, DR. ELLSWORTH ELIOT, in the Chair.

VICTIMS OF YELLOW FEVER.

FOLLOWING the reading of the minutes, Dr. J. Marion Sims read a memorial and offered resolutions relative to the members of the medical profession who died at Memphis of yellow fever during the late epidemic. On motion, Drs. Sims, Parker, Metcalfe, G. M. Smith, and Sands, were appointed a committee to solicit subscriptions to a fund to be used in erecting a monument to the memory of the deceased physicians.

NEW MEMBERS.

The following gentlemen, being recommended by the comitia minora, were granted certificates of membership: T. MATLACK CHEESMAN, 5 E. 27th street, a graduate in medicine at the College of Phys. and

Surg., Univ. of the State of New York, in 1859; J. VARNUM MOTT, 99 Park ave., a graduate in medicine at the Col. of Phys. and Surg., Med. Dept. of Columbia Col., in 1872; HENRY T. STRONG, 130 W. 129th street, a graduate in medicine at the Col. of Phys. and Surg., Med. Dep. of Columbia Col., in 1868; HENRY S. SWAN, 147 W. 45th street, a graduate in medicine at the Col. of Phys. and Surg., Med. Dep. of Columbia Col., in 1871; ROBERT F. WEIR, 19 E. 32d street, a graduate in medicine at the Col. of Phys. and Surg., Univ. of the State of N. Y., in 1859; CLAUDE G. STANLEY, 158 E. 28th street, a graduate in medicine at Bellevue Hosp. Med. Col., in 1870; GEO. H. FOX, 111 W. 34th street, a graduate in medicine at the Univ. of Pennsylvania, at Philadelphia, in 1869; GEOFFREY R. BOURKE, 40 Leroy street, a licentiate of the Royal College of Surgeons, Ireland, in 1869, licentiate of King's and Queen's College of Phys., Ireland, in 1869; and GEORGE W. HOLMES, 368 Broome street, a graduate in medicine at the Univ. of Mich., in 1872.

DECEASED MEMBERS.

The PRESIDENT announced the death of DR. JOSEPH SMITH PERRY, a licentiate of the Ulster Co. Med. Soc., and a member of this Society since 1828, who died in this city, January 3d ultimo, in the 89th year of his age.

MISCELLANEOUS BUSINESS.

The petition of Dr. F. R. Newman, that the Society recommend him to the State Medical Society as a suitable person to receive the honorary degree of Doctor in Medicine, was granted.

The SECRETARY read a report from the comitia minora, accompanied by a communication from Dr. Prout, of Kings County, relative to a change in the mode of electing permanent members to the State Medical Society, as follows:

The committee recommend that this County Society recommend the following to the State Society, with the request that proper steps be taken to insure its enactment:

"*An act* to regulate the manner of electing permanent members in the Medical Society of the State of New York:

"The people of the State of New York, represented in Senate and Assembly, do enact as follows:

"SECTION 1. It shall and may be lawful for the Medical Society of this State to elect annually sixteen permanent members, in such manner as said Society may from time to time determine by its by-laws, who shall be chosen from the thirty-two senatorial districts now existing, in alternation, by even and odd numbers. The members so elected shall reside in the districts from which they may be chosen.

"Provided, however, that when a county shall contain two or more districts, residence shall be restricted only to the including county.

"SEC. 2. All acts or parts of acts inconsistent with this act are hereby repealed.

"SEC. 3. This act shall take effect immediately."

The PRESIDENT explained that since 1836, when the proportion of regular members was regulated by legislative enactment, and made to bear the same proportion to the population that existed in the senatorial representation, the population of the State and its senatorial representation had greatly increased, and instead of electing eight permanent members we should have sixteen.

The district to which New York and Kings County belong had already forty-eight on the list of those who are eligible for permanent membership, and at the rate of two annually, it would require twenty-four years to exhaust the list, even if no additions were to be made.

DRS. CHADSEY and VAN KLEEK made a few remarks upon the subject, the former advocating the change proposed, the latter thinking that the interests of the State Society required that, whereas the distribution of appointments should be characterized by fairness towards all the districts, the Society should be restricted to its present limits as regards the number of members.

On motion, the communication was adopted as expressive of the views of this Society.

DR. VAN KLEEK offered resolutions regarding Dr. Stillwell, deceased, which were adopted.

The PRESIDENT announced the presence of DRS. FITZGERALD, of Salem, Mass., and GATES, of Concord, N. H.

REPORT OF COMMITTEE.

DR. A. B. JUDSON read, in the absence of Dr. Russell, the Report of the Committee on Diseases.

By this it appears that the grand total of deaths in New York, in the year ending Dec. 31, 1873, was 29,054, against 32,647 in 1872, and an average in the preceding five years of 27,370.8. These 29,000 deaths were divided among the five classes as follows:

Zymotic, 9,593; constitutional, 6,293; local, 10,154; developmental, 1,883; by violence, 1,161; diarrhœal diseases in children under five years of age caused 3,634 deaths against 4,680 in 1872, and an average of 3,487 for the preceding five years; diphtheria caused 1,151 deaths against an average of 319; membranous croup, 732, against an average of 477.4; small-pox, 117 deaths, against 929 in 1872 and 805 in 1871; measles, 306 deaths, the average for five years preceding being 379.4; from scarlatina came 1,045 deaths, against an average of 916. In the past six years small-pox caused 2,373 deaths; measles, 2,202, and scarlatina, 5,628. Consumption caused, in 1873, 4,134 deaths. There were 117 suicides, and 155 deaths from drowning. In the institutions were 4,755 deaths. Of the total mortality there were 14,128 deaths of children under five years old; 1,495 of persons over seventy. The following cases of contagious diseases were reported to the Sanitary Bureau: Typhus fever, 83; typhoid fever, 371; scarlet fever, 2,747; measles, 1,061; diphtheria, 1,591; small-pox, 330.

DRAINAGE AND SEWERAGE.

DR. MOREAU MORRIS, Chairman of the Committee on Hygiene, then read the report of the Committee, which was submitted for transmission to the State Society.

The Doctor first explained the difference between the terms drainage and sewerage, and then proceeded to say that in the settlement of an individual or community upon any new territory, the question of its drainage is of the first importance. Sewerage may also become a subject of consideration. The continual health of the individual, as of the community, depends upon the proper drainage of the natural soil, while the question of sewerage awaits the force of circumstances, without, perhaps, being indispensable to continued health. A water-saturated soil cannot be dwelt upon and perfect health be maintained; therefore proper drainage becomes a vital necessity to its permanent occupancy. Drainage is that system or method by which the unnecessary or superabundant water may be removed from the soil which has or may become saturated. It may be of natural or artificial means, or by a combination of both. The natural topography may be such as

to require but little aid from art in perfecting the drainage of a section of country, while, on the other hand, art alone may be able to so drain it as to render it habitually healthy. Therefore, among the first conditions presented in the selection of a site for human occupancy is involved a study of its topography, and, incidental thereto, of its substratum or geological formation. Natural water-courses, assisted by art, often afford the best means for draining saturated soil, and should never be lost sight of in any artificial adaptation. Too often an ignorant interference with nature's provision has brought untold misery upon future residents. "Water will not flow up-hill," and "always finds its lowest level," and unless it finds an outlet, natural or artificial, will saturate adjacent soil.

A lamentable example of this occurred a few years ago at Seventy-fifth street and Third avenue, where some builders permanently obstructed a natural water-course, and caused the submergence and saturation of more than fifteen acres of soil that had been drained by it previously. The result was, that almost every dwelling for several blocks around suffered with malarial poison, from which many deaths occurred. The ignorant but popular idea that filling in earth upon saturated soil precludes the necessity of deep drainage has produced permanent evils that, at the present day, it is almost impossible to remedy. No statistics, illustrations, or arguments are needed in the present day to convince the medical profession of the unhealthiness of saturated soil for human habitation. A very large proportion of human ailments can be traced directly or indirectly to its influence. Even a water-saturated atmosphere directly tends to increase mortality among the enfeebled, as we have had abundant evidence during the recent long-continued and dense fogs, by the mortuary statistics of this county. While mortuary tables exhibit only a small portion of the influences of water-saturation, we should not forget the sickness and impaired health which have been the direct and indirect consequences.

Respecting the causes which are in operation by which streams are made the source of disease, may be enumerated the grading streets and avenues across the line of natural drainage without making provision by culverts for the passage of water in its natural bed; filling up boulevards with refuse and garbage, causing a permanent deposit of decomposing organic matter, which for all time remains to add a fetid character to the exhalations which arise; and making use of natural streams for sewerage of all kinds.

Gen. E. L. Viële, in a report to the Board of Health, in 1870, gives a notable instance of this in one of our public hygienic institutions, the Bloomingdale Lunatic Asylum, situated upon high ground, between Tenth and Eleventh avenues, near the Hudson River. A stream near the institution has been used as a receptacle for all its liquid refuse. This stream passes along the line of Tenth avenue to One hundred and twenty-fifth street, where it meets with low, swampy ground, empties into a pond at the junction of One hundred and twenty-fifth street and Tenth avenue. In the neighborhood of this pond fevers of a malignant type have prevailed for years. Hardly a person within the radius of half a mile has escaped the deleterious effects. Other instances he enumerates equally striking in their direct effects upon life. In laying out railroads and highways, canals or other internal improvements, through any section of country, natural drainage-streams are constantly obstructed, and stagnant ponds formed, which inevitably produce evil effects. In the upper portion of the county lying above Fifty-ninth street, for many years past, fevers, intermittent, remittent, and typhoid, have been constantly prevalent.

With recent improvements in drainage and sewerage, already these forms of disease are becoming less prevalent. Yet so many undrained sections still exist, in connection with acres of "soil-saturated areas," that some years must elapse before the sources of these fevers will be entirely removed. The report concluded by pointing out the fact that the Health Commissioners permit the filling in of all the marshy lands of Harlem Flats with the refuse garbage of the city, and concurs with the opinion of the State Committee that the work of primary importance is drainage.

Dr. A. N. Bell, of Brooklyn, Chairman of the Committee of the State Medical Society, expressed his gratification with Dr. Morris's paper. The committee had received twenty-four responses from County Medical Societies, and three or four reports have been made, while more are expected soon. Dr. Bell then went on to speak of drainage in Brooklyn and in Kings County the condition of which, he said, was much worse than that of New York. In that county are over 100,000 acres of deficiently drained land, and careful investigation shows that one-fifth of the total mortality in the city of Brooklyn is due to defective drainage.

Measures for draining portions of the island had been very successful, and the farmers were beginning to appreciate the value of the improvement, as an agricultural as well as a sanitary measure. The Doctor mentioned that not far from Brooklyn, where some time ago a woman committed suicide by drowning in seven feet of water, flourishing farms now existed.

An obstacle to the natural drainage of some portions of Kings County was the presence below the soil of a hard-pan which held the surface-water in basins. In the Prospect Park this trouble had been removed by making perforations at the lowest points in these hollows, so that the water could pass through to the stratum of earth beneath.

He further referred to the insalubrious character of the artificial ponds caused by the so-called *city improvements*, and called attention to the "Drainage Reports" of the Board of Public Works, which had no evidence of anything whatever in the way of drainage having been done, and related entirely to sewerage.

Dr. Gates, of Concord, was invited to speak on the subject, and said that in his locality the natural drainage of the land and the sandy nature of the soil were such that he had little opportunity of knowing much by experience of the effects of soil-saturation. A system of drainage, however, was being undertaken in Concord, which, with but little expense, would make it one of the healthiest cities in the country.

Dr. Caro spoke of the very great changes which had resulted from improvements in the drainage of Italian cities, mentioning Palermo and Rome as examples, in which malarial fevers had been greatly diminished, both in frequency and intensity, as a result of improvements in drainage during the past three years.

The paper was accepted, and directed to be forwarded, as the report of the committee, to the Committee of the State Society.

NEW INSTRUMENTS.

Dr. Robert Newman exhibited a galvano-cautery battery, made by Mr. Drescher, and illustrated its power of heating an iron or platinum wire for an indefinite period.

Dr. Jacobi remarked that, although the battery was an excellent one, the credit of its invention was due to Stœhrer, and not to Mr. Drescher.

Dr. Beard acknowledged that Stœhrer was the first to adapt this form of battery to the wants of the profession, but that Walker, of London, was the one who suggested, about 1855, the use of carbon instead of platinum.

ARMY MEDICAL STAFF RANK.

Dr. J. C. Peters moved the adoption of the resolutions passed by the Academy of Medicine at its recent meeting, relative to the rank of army medical officers, which motion was carried. He then moved the adoption, by this Society, of the resolutions of the Pathological Society relative to the congressional appropriation for the maintenance of the Army Medical Museum and Library. Carried.

The President then announced the subjects of the papers to be read at the next meeting, and the Society adjourned.

Correspondence.

THE SIAMESE TWINS.

To the Editor of The Medical Record.

Sir: Last night the remains of the Siamese Twins were exhibited to the Fellows of the College of Physicians, and the nature of their intercommunications, as far as yet determined, explained by Drs. Wm. H. Pancoast and Harrison Allen. I endeavored to obtain permission from the meeting to have The Medical Record furnished with an abstract of the result of the autopsy, or "report of the commission," as it is called, similar to that which will appear in this week's *Medical Times*, but it was ungraciously refused. The Editor of the *Times*, however, has promised to send you an advanced copy of his own report of the meeting, as taken down by two professional phonographers, and you will therefore receive, in time for your next issue, a much more accurate account than I could have furnished.

The connecting medium is a band four inches in length and eight inches in circumference. The ensiform appendix of each body is continuous in this band, arching forwards in the form of a bow, an acquired configuration, doubtless, the result of their reciprocal efforts to accommodate their position side by side. In the normal condition they face each other. This ensiform connection is fibro-cartilaginous and flexible; but there is no evidence of any articulation permitting the amount of motion known to exist in life; for it is said that one of the twins could rise and cross the body of the other, without awakening him from sleep. A thin, translucent section of the central portion of this band, held up to the light by Dr. Allen, appeared homogeneous, without any evidence of junction of separate processes.

The peritoneal cavity of each twin terminates in a cul-de-sac, or pouch, which crosses a similar arrangement of its fellow within the band. Each pouch crosses the middle line, and the finger passed within one of them enters the suspensory ligament of the opposite body, but the pouches are not at all connected. The cul-de-sac of Chang is double, the single cul-de-sac of Eng dipping between it. Hence, a division through any point of the band would have inevitably opened both peritoneal cavities. A nice dissection, however, would have permitted the separation of these peritoneal sacs. There are no large vessels in the band. The only actual intercommunication appears to be what Dr. Allen called a "portal continuity" between the livers. An injection into the portal system of Chang passed into the portal system of Eng.

The livers of the twins are on the adjoining sides respectively, and are lost in an intercommunicating tissue, which may or may not contain hepatic substance. To the touch there is no evidence of liver structure; but the edges of each liver cannot be felt in a continuous line, and there is therefore a possibility of this communicating tissue having primarily been continuous with each liver, in which case some evidence will be found on minuter dissection and on microscopic examination. The umbilicus of the twins is common, and exists at the lower edge of the band, the navel being much obliterated; but there is a curious anomaly in each case, consisting of an isolated mass of fat, about the volume of a chestnut, under the peritoneum, at the point where a normal umbilicus would exist.

Posteriorly there is a large subcutaneous pouch on each side, crossing the middle line of the band, the significance of which has not yet been made out. Some of the muscular fibres of one body cross over into the other; but for the details on these points I refer you to the elaborate report prepared for the *Times*.

The thoracic viscera have not yet been examined. The report of Drs. Pancoast and Allen was merely a verbal one, and was illustrated by a number of casts and drawings. The final report will be very elaborate, and will probably be published, with chromo-lithographic illustrations, by the College or by the Smithsonian Institute, or some other liberal scientific body.

In the course of his remarks Dr. Pancoast alluded to a number of humorous incidents in the history of the twins. He stated that they never really desired to be separated except on one occasion, when, after a quarrel, they repaired to the residence of Dr. Hollingsworth for that purpose, but changed their minds before they left his office. It appears that it was "an exhibition dodge" with them to have the band examined from time to time, and to have the feasibility of separation discussed by eminent authorities in the various places they visited, the "draw" being usually immense after the announcement of one of these examinations. It certainly appears to me, though I may be an incompetent judge, that they could have been separated without great danger to life, even though the peritoneal sacs had been opened. Peritoneal sacs are opened frequently by surgeons, nowadays, without fear of fatal results.

The one body showed, in every particular, greater physical development than the other. It is the body of the temperate twin, the other one having been frequently given to intemperance, which, however, had no effect upon his brother; showing a want of essential nervous as well as vascular intercommunication. The weaker brother was dead several hours before the other was aware of it, and much of the immediate cause of his death is to be attributed to the nervous shock he experienced on realizing his own perilous condition.

After the report had been made, Dr. Jacobi, of your city, was requested to give his opinion as to the mode of conception or development of this curious twin-product; and, in a very neat address, which will probably be appended to the report in the *Times*, expressed his preference for the belief of those who considered such formations due to the simultaneous fecundation of two nuclei in one ovum, or two ova in one Graafian follicle, rather than the belief that there had been an adherence of two separate conceptions in one amnion.

While the report was being made a twin-apple was

handed round—two apples joined together, one larger than the other, and labelled Chang and Eng, in accordance with the relative size of the twins. The passage of this natural vegetable phenomenon at such a time caused considerable merriment.

The useless ban of secrecy being removed by the officially recognized publication of the report in the *Times* of this city, I do not feel that I am committing any indiscretion towards the College in forwarding this communication, in spite of the refusal which I have received.

I am, yours truly,

J. SOLIS COHEN.

PHILADELPHIA, *Feb.* 19.

A WORD IN REGARD TO THE HISTORY OF THE OPHTHALMOSCOPE AS AN OPTOMETER.*

BY EDW. G. LORING, M.D.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Through the courtesy of the President of the County Medical Society of New York, I was invited to be present at the meeting of Nov. 24th, and to take part in the discussion which followed the reading of the paper entitled "Ophthalmoscopic Optometry," and which was published later in THE RECORD, under date of Jan. 15th, p. 30.

From the emphasis with which Dr. Knapp dwelt upon the fact in his introductory sentences, I was led to believe that the chief claim that he had for the kind indulgence of his audience was the fact of the "novelty" of the subject of his paper, and its great, though comparatively little recognized, importance in ophthalmic practice.

Hearing this, and knowing the reader's great erudition, and his intimate and exact knowledge of everything which pertains as well to the theory as the practical application of the ophthalmoscope, I was surprised to hear him, in his first formal proposition concerning it, say: "A comparatively new field is its use as an optometer; that is, (1)† *the determination of the refraction of an eye independently of the statements of the patient*" (loc. cit., p. 30).

It does not seem to me that the above accords with the correct statements of the facts of the case. Helmholtz, in 1851, or twenty-three years ago, first published his description of the ophthalmoscope, and "it is interesting to see," as Mauthner observes, "how perfectly the inventor of the ophthalmoscope understood the entire range of its capabilities in determining the refraction of the eye." "By its means," to quote the words of Helmholtz himself, "the observer has the ability to determine the optical condition of the eye independently of the statements of the patient."

Words uttered twenty-three years ago strangely similar to those with which Dr. Knapp now ushers in a comparatively new field in ophthalmoscopy.

In 1856, or eighteen years ago, Ed. Jaeger published a treatise on "*The Ophthalmoscope as an Optometer*," and in speaking of this work, Donders (*Anom. of Refraction*, p. 331) says: "Von Jaeger, following the example of Helmholtz (Berlin, 1851), early recommended the ophthalmoscope for the determination of the refraction of the eye, and he has undoubtedly acquired great expertness in the use of this method. His observations extend over more *than* 1,600 *eyes*." And this eighteen years ago!

In 1861, or twelve years ago, Jaeger republished his views on the "Ophthalmoscope as an Optometer" (*Ueber die Einstellungen*, etc. Wien, 1861). This second publication was translated into the *Annales d'Oculistique* for July and August, 1862. In the same year Dr. Hay, of Boston, translated it into English, for the *Medical and Surgical Journal* of that city (Dec. 1862). And Stellwag in his first edition (1862) also speaks briefly but clearly of the advantages of this method of determining the refraction.

In 1864, Donders, in his great work, gives, as is his wont, a short but exceedingly lucid explanation of the whole matter, with, however, some objections to the method, which, as Mauthner shows in his own exhaustive treatises on the subject (1867–68) were more imaginary than real. It is to this last author, more than any other, that the ophthalmoscope as an optometer owes its present perfection. And finally, in 1870, the writer of these remarks published a long paper in the *Journal of Medical Sciences*, with a profuseness of illustration adapted for those who, like himself, were wanting in mathematical acquirements.

With such a chronological record as this before him, Dr. Knapp introduced as a "novelty," for the consideration of the County Medical Society, the "use of the ophthalmoscope as an optometer," "a comparatively new field," in which the name of the earliest explorer mentioned is his own, in 1867. And after being reminded, in the detailed discussion which followed, of his illustrious predecessors, the paper is published in one of the standard journals of the day without an allusion to any one of them.

In regard to the second division of the uses of the ophthalmoscope, that is, "the determination of elevations and depressions on the background of the eye," Dr. Knapp himself begins by saying: "The method of ascertaining the relief of the background of the eye is only a repetition of the determination of the state of refraction." The rules and formulæ for this were laid down by Helmholtz in 1851. That is to say, given the rules how to make a geometrical measurement, and the standard of measurement, we have simply to make such measurements. "This method," says Dr. Knapp, "of determining the relief of the background of the eye, was first described by myself at the Congrès International d'Ophthalmologie at Paris, in August, 1867, and published in the Transactions of that society, p. 165. *A year later* Mauthner described it in his exhaustive treatise on the ophthalmoscope, Vienna, 1868." It is true that Mauthner did describe it in 1868; but Dr. Knapp neglects to state that this was not the *first* time that he described it.

Mauthner's treatise appeared in 1867, not, "a year later, in 1868." The title of this work is the "Determination of the Anomalies of the Refraction by Means of the Ophthalmoscope, Vienna, 1867;" also, Leipzig, Fues's Verlag, 1867.

After having been informed of this fact at the meeting, if the author of the paper had had any doubt as to the correctness of the information, he might have convinced himself by turning to p. 46 (loc. cit.), where he would have found a full discussion of the determination of the relief of the bottom of the eye, and on p. 66 a mathematical exposition of the formula by which the "estimation of different levels" is computed. He would also have found there, given seven years ago, the formula for the calculation of l_3 which he now promises to give in a forthcoming number of his Archives. From the formula which Mauthner took from Helmholtz, $l_1\, l_2 = F'\, F''$ I calculated (1870)

* Ophthalmoscopic Optometry and Demonstration of a new Ophthalmoscope. H. Knapp, M.D.

† The italics are the author's.

the different valuations of l_s for all the more commonly occurring degrees of refraction from $\frac{1}{4}$ to $\frac{1}{60}$. These tables have been in use for the past four years; but I regret to say that their practical importance is less than I hoped would be the case.

Mauthner's later work, into which this pamphlet was incorporated, "Text-book of Ophthalmology," appeared as a whole in 1868, though the first part of even this later work came out originally in 1867. And this in its turn was but the elaboration of some earlier articles published during the previous year in the *Austrian Journal of Medical Science.** In number 52 of this journal, for the year 1866, Mauthner, by means of mathematical formulæ and clinical examples, gives a thorough exposition of the method of determining the different levels of the bottom of the eye—a method which Dr. Knapp now claims was first described by himself in 1867; consequently Mauthner's paper was *printed eight months before the Congress took place at Paris*, and considerably over a year before its Transactions, which contained Dr. Knapp's paper, were published (1868).

It would also appear that there has been a mistake in regard to Dr. Knapp's assertion that his cases of "hyperopia of $\frac{1}{4}$ in one eye and $\frac{1}{3\frac{1}{4}}$ in the other are the highest degrees of that anomaly ever observed in eyes possessed of their crystalline lenses"—a mistake which the most casual examination of the literature would have prevented. Thus Donders, p. 241, observes in the case of Dr. De Haas: "It appears that Hm amounts to very nearly $\frac{1}{4}$, and nevertheless, with strong convergence, Dr. De Haas still attains to nearly the accommodation for parallel rays." On page 258 he mentions a case of H of $\frac{1}{7.5\frac{1}{7}}$ in one eye and $\frac{1}{3.\frac{1}{6}}$ in the other; on page 258, he gives a case reported by Bowman, "in which glasses of $\frac{1}{1.\frac{1}{6}}$ being employed for distant vision, the degree of H was $= \frac{1}{7.\frac{1}{7}}$;" and on page 290 a detailed account of this case is given by Bowman, who says that he "perfectly satisfied himself that the lenses were present." I have myself, through the kindness of Dr. Cutter, of the N. Y. Infirmary, seen a case within the past month where the Hm was $\frac{1}{7\frac{1}{8}}$ as measured both by the ophthalmoscope and by glasses. Mr. Bowman's case is a fac-simile of the case reported by Dr. Knapp, only the H was *twice* as much as that in the most ametropic eye mentioned by the latter.

I have been induced to make the above remarks, independently of the interest of the subject, out of a sense of justice to the great names which rescued the specialty which I practise from the hands of charlatans, and elevated it to a scientific standing, and who have for the past quarter of a century, whatever may be its present tendencies, maintained its dignity as well by their practice as their teaching.

A NEW APPLICATION FOR ESMARCH'S ELASTIC WEBBING.

To the Editor of The Medical Record.

Sir: Esmarch's use of elastic webbing for bandaging the limb in his "bloodless operations," suggests its application in cases of extreme prostration from hemorrhage or other analogous causes, instead of the simple local constriction of the limb heretofore practised. It would not be an exaggerated estimate, perhaps, if we assumed that by bandaging all the extremities in this way we could effect a temporary addition of twenty-five per cent. to the amount of blood circulating through the vital organs.

Yours, etc.,

Andrew H. Smith, M.D.

110 East 38th Street, Feb. 5th, 1874.

SOME OF THE INFLUENCES OF HYGIENE ON THERAPEUTICS.

By J. R. Black, M.D.,

Newark, Ohio.

To the Editor of The Medical Record.

Sir: Perhaps one who, in an active professional life of a little more than twenty years, its first decade graced by no more than an ordinary professional knowledge of hygiene, part of the last almost embarrassed by an endeavor to grasp and formulate its ultimate and most comprehensive truths,* may be in position to communicate somewhat on the practical relation of the principles of prevention to those of cure. At the least, one who has undergone the experience of seldom thinking, and then of thinking a great deal, upon the relation of sanitary truths to practical therapeutics, must be sensible of the disadvantages of the one, or the advantages of the other, as the case may be. A brief analytical view of this experience, in one or two aspects, is what I now purpose to give.

A truth that steadily grows in the mind as the knowledge of sanitary science increases, is, that the number of diseases which cannot be avoided is exceedingly small. Indeed, an ideal state becomes readily conceivable in which inherited taints and imperfections may be obliterated—in which any one may attain so nearly to absolute purity, and to an absolute perfection of constitution, that disease would be almost unknown; abolishing premature death, except by accident, and rendering natural death by the harmonies and progressive decay of each organ of the body, as in pure old age, the rule, instead of the rare exception.

If there is an undue tendency to regard disease as an entity rather than a condition, no more effectual means of counteraction can be adopted than in the study of hygiene. It makes plain to the mind the conditions amid which many diseases are begotten; the phenomena of disorder, without puzzling the mind with endless minutiæ of exact changes in form or function, as if, when we have found these, we have the causes, instead of the products, of morbid action.

After all, what can ever be known of the essential or ultimate causes of morbid action—what more than its mere appearances? The verdict of modern philosophy is nothing. As Herbert Spencer states it (I quote from memory), of causes ultimate or otherwise, we can know nothing, only the succession and relation of phenomena; all else is of the unknowable. If it is supposed that in the transformation or accumulation, etc., of a little plastic matter in the pulmonary vesicles the ultimate cause of tuberculosis may be discerned, and this once attained, physicians may then set about its removal by rational rather than empirical means; the old-time mistake of taking appearances for the essence of things will be made. Take a little of the matter from a syphilitic ulcer, examine it carefully with the microscope, the spectroscope, with all the appropriate senses and their aids, and there is nothing which can

* *Oesterr. Zeitschrift für praktische Heilkunde.* Wien, Dec. 1866, No. 52.

* The Ten Laws of Health.

be discerned that would enable any one to predict *a priori* that it would, when introduced into the blood of a healthy person, produce the series of sensations and appearances which it has the well-known power to do. Nor when able, as in this case, and in hydrophobia, to isolate the *materes morbi*, is there a ray of light thereby gained into the best means of counteracting its disastrous effects on the body.

The study of hygiene makes the doctrine clear to the mind, that a simple variation of an aggregate of circumstances, conditions, and habits, is capable of giving rise to a marked variation in the type of disease, or, as some think, to a new form of disease, as in typho-malarial fever. This was unmistakably seen during the late war, in which the soldiers, from a simple variation of habits and circumstances, suffered by a form of diarrhœa and of fever very different from that which prevailed at their homes, or from that which prevailed among the inhabitants of the regions among which they were encamped. There was then no new entity, only a new aggregate of conditions; and why it acted upon vital force and brought about a peculiar form of morbid action, we will never know any more than we will ever know why aloes purge or strychnine convulses.

A thorough knowledge of hygiene contributes in an eminent degree to successful therapeutics. When advice is required by a person in the incipient stage of consumption, he would not simply receive a prescription for some medicine, with the brief advice to go home and take care of himself. Such advice, in nine cases out of ten, is taken to mean that he must keep in a close, warm house in rough weather; that he must be careful not to take cold by allowing any fresh night-air to reach him in his bedroom, and that he may give his lungs for an hour or two on fine days the benefit of a pure outdoor-air. The fact does not occur to the mind of such an adviser that the natural food of the lungs is pure air; that the mere fact of its expulsion once from the lungs, after an instant's contact, is *prima facie* evidence of its unfitness by contamination, even in that short time, for the purposes of healthy life; and that the lungs cannot be properly fed in an hour or two each day, but that they require wholesome nourishment sixteen times every minute, or more than twenty thousand times a day. In thinking of all this, and of the additional fact that, while consumption is unknown among animals that breathe pure outdoor-air day and night, it soon manifests itself when they are housed and confined in stagnant air, the medical adviser would insist on pure air for the lungs during every minute of the day and night, and, to those able to afford it, to seek the *best quality* of lung-food the continent affords, where every breath exhilarates and makes the blood-corpuscles to tingle in the capillaries with exuberant life.

The practitioner unacquainted with hygiene is very likely to manage a case of dyspepsia thus: he directs some medicament to relieve the most urgent symptoms, with perhaps a tonic for the debilitated organ; the patient is also cautioned to be careful in his diet, with perhaps a prohibition or two. Now, what is the ordinary result of such treatment and directions? Why, the sufferer may be relieved for a few days, but in a week all his miseries have returned. He goes through a like course again and again with the same results, until, utterly disheartened, he tries another and another doctor, seeking rest and ease, and finding none. The hygienist who has gone to the bottom of such troubles, that is, to their origin, in addition to his medicines, advises thus: You must let all forms of pastry and sweetcakes alone; eat no more warm bread unless it be Graham biscuit;* avoid all fried foods and those of a very fatty nature; eat no concentrated preparations, like a preserve or marmalade; eat slowly; masticate well; do not give your stomach the work your teeth ought to do; do not drink while you eat, washing your food into the stomach in a lumpy condition and without the due admixture of saliva; do not partake of a variety of foods at a time, but make a meal out of the two or three articles you commence with; change your diet as you please, from meal to meal, but absolute simplicity in each is indispensable. Under these directions, faithfully carried out, with a little medicine, I have not met with a case of dyspepsia that did not steadily and progressively recover.

In the past three days two cases of periostœal inflammation and incipient caries—one of the os innominata, the other of the ulna and radius—were brought to me from a distance. Both are the sons of hale, hearty farmers, living in healthy districts. The age of one is eight, the other ten. The disease in each is of some months' standing, and pronounced by more than one of the previous medical attendants to be of a scrofulous character. Yet there was no perceptible glandular enlargements, nor anything of the kind in any of the members of either family. What, then, is the cause of the disease in such cases? The hygienist would probably give a very different answer from the pathologist. For one, I am convinced that the true explanation of the great frequency of osseous diseases in the young, while the bones are undergoing rapid development, is that the blood is too poor in the elements on which their enlargement depends. The salient facts in such cases are these: that nearly all idiopathic bone-diseases and deformities occur in the young during the period of rapid growth; that the amount of the phosphates which would properly nourish the osseous system of an adult would not do so in a child, and that by the prevailing system of dietetics nearly the whole of the phosphates are eliminated from our standard foods. The shell of phosphates which underlie the husks of the cereals is carefully excluded; the arts and pampered tastes of men are taken as better guides to what constitutes a wholesome and proportionate ratio of elements for the proper nourishment of all the tissues of the body at different periods of life, than the unheeded cravings (morbid though they often are, as in the dirt and lime-eating habit) and the wisdom of constructive nature.

Therefore, in the treatment of all forms of osseous diseases in the young, the digestive organs acting normally, it should be a leading object to enrich the blood with all the elements upon which their healthy growth depends. And this should be done by giving to the young sufferer the needful earthy matter in an organic form, or as it is prepared for us by nature from inorganic matter. The products of the laboratory of the chemist are not a substitute for those of nature. No generalization is clearer than this, that though all the elements of our bodies exist in the inorganic world, they are not fit for assimilation until raised and knit together by the force of vegetative life. A syrup of the phosphates is therefore not a substitute for the shell of phosphates which lie underneath, and is commonly separated and thrown away with the outer

* The reason why ordinary warm bread is hurtful arises from a simple mechanical condition. Mastication reduces it to a doughy state, so that the gastric juice cannot penetrate its mass, but can only act upon its outside, and before the inside is reached fermentation has occurred. But suppose that in place of refined, unbolted flour is used, as in Graham biscuit: the coarseness of the bread-texture enables the gastric juice to penetrate and digest its mass at once, and no inconvenience is felt even by the confirmed dyspeptic. Let those who do not believe, put it to the test.

covering of the wheat kernel. Chemically pure carbon, in any of its allotropic forms, will not make fat; no more can bone, or skin, or hair be made or nourished out of any inorganic concoction of their elements.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 5, 1874, to February 18, 1874.

EDWARDS, L. A., Surgeon.—Leave of absence extended 15 days. S. O. 29, Military Division of the Atlantic, February 10, 1874.

GHISELIN, JAS. T., Surgeon.—Relieved from duty as Attending Surgeon at Portland, Oregon, to enable him to avail himself of his leave of absence. S. O. 18, Department of the Columbia, February 4, 1874.

RANDOLPH, JNO. F., Surgeon.—Assigned to duty as Chief Surgeon with troops under orders for field service in vicinity of Fort Laramie, Wy. Ty. S. O. 22, Department of the Platte, February 14, 1874.

HEITZMANN, C. L., Assistant Surgeon.—Assigned to duty with troops under orders for field service in vicinity of Fort Laramie, Wy. Ty. S. O. 22, C. S., Department of the Platte.

CLEARY, P. J. A., Assistant Surgeon.—To report in person to the Commanding General Department of the Missouri, for assignment to duty. S. O. 34, A. G. O., February 16, 1874.

WIGGIN, A. W., Assistant Surgeon.—Detailed temporarily for duty as Attending Surgeon at Portland, Oregon. S. O. 18, C. S., Department of the Columbia.

Medical Items and News.

THE SIAMESE TWINS.—A partial post-mortem examination of the band which joins these twins has been made, under the direction of the College of Physicians of Philadelphia, by Professors Wm. H. Pancoast and Harrison Allen. From an official report of the same, made on Wednesday evening, Feb. 18th, and published in the *Philadelphia Medical Times*, we make the following abstract:

The band was four inches long and eight inches in circumference, and was made up of a fibro-cartilaginous union of the ensiform cartilages, the fasciæ of the oblique, the rectus, and transversalis muscles, and contained three peritoneal pouches, two from Chang (the left twin) and one from Eng (the right twin), crossing each other at the median line, Eng's pouch dovetailing the other two. The upper pouch of Chang, which was the largest of the three, was, like the others, empty; but was supposed by Prof. Allen to have contained, in the fœtal condition, liver-tissue. This he denominated the hepatic pouch. Besides these, there was direct communication of the two livers with each other, through a solid isthmus, as was made evident by the fact that plaster, colored by ultramarine, was thrown into a tributary of the portal vein of Chang, when it was observed that the fluid passed freely into the liver of Eng.

The hypogastric arteries ran upward in each body into the band, and were lost toward the common umbilicus in the anterior-inferior surface of the middle of the band. The band itself was covered with integument fascia. The opinion of Prof. Allen, as to the cause of death of Chang, was cerebral clot, while Eng died of fright, one evidence of which was an enormously distended bladder.

Dr. A. Jacobi, of this city, who was present at the meeting, remarked as follows:

As far as the origin of twin monsters is concerned, I am certainly of those who are not of the opinion that two individuals could get into such an intimate connection by growing together. Certainly the connection is a more intimate and original one. I believe that the general opinion is now that one Graafian body may contain two ova, or one ovum have two nuclei. During fœtal life, the first development of the ovaries takes place from a conglomeration of cells. Part of these form into germinative cells, part into connective tissue. The former are, or are developing into, the ovum that will be, with its nucleus, plasm, and membrane. The latter is formed in lesser or greater quantities. When its layers are but thin between two germinative cells, two ova may get enveloped in one Graafian body, or even two nuclei in one ovum. Thus one menstruation may yield two ova, or an ovum with two germinative centres. I think this will also explain why the sex is always the same—why they are always both male or both female. They are male in but twenty or twenty-five per cent. of the cases.

The peculiar conditions under which the autopsical examination was carried on, rendered it impossible to settle these, among other points, and the dissection of the band not being complete, a more detailed report is promised.

The following interesting account of the physical condition of the twins is likewise extracted from the *Philadelphia Medical Times*, and furnished by Dr. Hollingsworth, for twenty years the attending physician of the twins at Mount Airy, N. C.:

"Their habits were very active. During the latter part of their life they and their families lived in two houses, about a mile and a half apart, and it was an inflexible rule that they should pass three days alternately at each house. So determinedly was this alternation maintained, that sickness and death in one family had no effect upon the movements of the father, and a dying or dead child was, on one occasion, left in obedience to it; indeed, Dr. Hollingsworth is very positively of the opinion that the death of the twins themselves was the result of this rule, or, at least, was materially hastened thereby.

"The evidences during life that the twins were physiologically distinct entities were very numerous and apparent. They were different in form, tastes, and disposition; all their physical functions were performed separately and unconnectedly. What Chang liked to eat, Eng detested. Eng was very good-natured, Chang cross and irritable. The sickness of one had no effect upon the other, so that while one would be suffering from fever, the pulse of the other would beat at its natural rate. The twins not rarely suffered from bilious attacks, but one never suffered at the same time as the other; a circumstance which seems somewhat singular in view of the close connection which the post-mortem has shown to exist between the livers of the pair. Chang drank pretty heavily—at times getting drunk; but Eng never felt any influence from the debauch of his brother—a seemingly conclusive proof that there was no free interchange in their circulations.

"The twins often quarrelled; and, of course, under the circumstances, their quarrels were bitter. They sometimes came to blows, and on one occasion came under the jurisdiction of the courts. After one of these difficulties Chang and Eng applied to Dr. Hollingsworth to separate them, stating that they could

not live longer together. Eng affirmed that Chang was so bad that he could live no longer with him; and Chang stated that he was satisfied to be separated, only asking that he be given an equal chance with his brother, and that the band be cut exactly in the middle. But as Dr. Hollingsworth advised very decidedly against this, and declined to interfere, cooler councils prevailed.

"In August, 1870, Chang suffered from a paralytic stroke, from which he never fully recovered; and during the last year of his life he several times said to Dr. Hollingsworth, '*We* can't live long.'

"On the Thursday evening preceding their death, the time having arrived for their departure from the house at which they were staying, the twins rode a mile and a half in an open wagon. The weather was very cold —the night being the severest of the winter. Chang had been complaining for some days of cough, with distress and actual pain in the chest. He was so unwell that his wife thought he would be unable to bear the trip; but he finally went. On Friday morning Chang reported that he felt better, but that in the night he had had such pain in the chest, and so much distress, that he thought he should have died.

"The twins slept in a room by themselves, or with only a very young child present; and some time in the course of Friday night they got up and sat by the fire. As they were accustomed to do this frequently, nothing was thought of it by those of the family who saw them, even though they heard Eng say he was sleepy, and wanted to retire, and Chang insisting on remaining up, stating that his breathing was so bad that it would kill him to lie down. Finally, however, the couple went to bed again, and after an hour or so the family heard some one call. No one went to the twins for some little time, and when they did go, Chang was dead and Eng was awake. He told his wife that he was very 'bad off,' and could not live. He complained of agonizing pain and distress, especially in his limbs. His surface was covered with a cold sweat. At his request his wife and children rubbed his legs and arms, and pulled and stretched them forcibly. This was steadily continued until he went into a stupor, which took place about an hour after the family were alarmed. The stupor continued up to death; according to the statements of the family, there were no convulsions."

Braithwaite's Retrospect ceased its existence with the January number. Its further publication has been considered unnecessary in view of the general adoption, by medical journals, of a department devoted to the progress of medical science.

Army Staff Rank.—At a meeting of the New York Academy of Medicine, held January, 1874, the following resolutions were adopted:

Resolved, That the members of the New York Academy of Medicine do hereby cordially unite with those of the American Medical Association in its memorial to Congress in support of a bill to Increase the Efficiency of the Medical Department of the Army of the United States, now before that honorable body.

They consider it an act of justice that the members of so important a branch of the service, gentlemen of the highest professional attainments and excellence of character, and charged with such highly responsible duties, should hold the same relative rank and enjoy the same emoluments as members of the other staff corps of the army.

That it be respectfully urged, upon the members of Congress from the City and County of New York, to use their influence in support of the bill in question.

That a copy of the above resolutions, duly authenticated, together with a copy of the memorial pamphlet, be furnished to each member of Congress.

Resolved, Also, that a copy of these proceedings be furnished for publication to the medical journals.

John C. Peters, M.D.
Gurdon Buck, M.D. } *Committee.*
Frank H. Hamilton, M.D.

The undersigned, a committee appointed by the Medical Society of the County of New York, highly approve of the action of the American Medical Association and of the New York Academy of Medicine in favor of a bill now before Congress to increase the efficiency of the Medical Department of the Army of the United States, and warmly recommend the adoption of the same by the Medical Society of the County of New York.

H. B. Sands, M.D.
A. C. Post, M.D. } *Committee.*
J. E. Taylor, M.D.

The Regulation of Insane Asylums.—A bill has been introduced into the New York Legislature on this subject, providing as follows:

"The Governor of the State is authorized to appoint for the City and County of New York not less than ten nor more than fifty, and in every other county not less than five nor more than twenty, reputable physicians, to be known as Examiners of Lunacy, and to fill vacancies occurring among such examiners as they occur; and in every case arising in any county requiring, as now provided by law, the certificate of two physicians to authorize the confinement for safe keeping of any person on the ground of lunacy, such certificate shall be required to be signed by two of the Examiners of Lunacy so appointed, resident in the county in which such case of lunacy is found; and no person shall be received as a lunatic in any asylum, public or private, without such certificate."

Up to the time of our going to press its fate is undecided. If the said bill should pass, and the proper persons be appointed on the commission, it may serve a good purpose. It is unnecessary to assume that such gentlemen should be well-educated alienists. This being the case, we shall then have the initiative taken towards establishing a corps of experts on insanity, whose duty it may be to examine all cases of doubtful insanity that may come before the courts.

Joseph Mather Smith Annual Prize.—This Fund is endowed by the relatives of the late Dr. Smith, in memorial of his services as Professor in the College of Physicians and Surgeons from 1826 to 1866. Under its provisions an Annual Prize of One Hundred Dollars will be awarded for the best essay on the subject for the year, presented by an alumnus of this College, or a member of the graduating class. The Prize Committee, consisting of the President of the College, the Professor of Pathology and Practical Medicine, and the President of the Alumni Association, shall designate each year the subject for the following year. The competing essays should be sent to the President of the College on or before the 1st of February in each year; each essay to be signed with a device or motto, and accompanied by a sealed envelope inscribed with the same device or motto, and containing the name of the author. The envelope of the successful essay to be opened, and the prize awarded, at the Annual Commencement.

The subject of the prize to be awarded in March, 1875, is Hygiene, in either of its Special Departments.

Original Lectures.

A LECTURE ON THE MEANS EMPLOYED FOR THE RELIEF OF STRANGULATED HERNIA,

ESPECIALLY THE OPERATION OF NOT OPENING THE SAC.

DELIVERED AT THE UNIVERSITY MEDICAL COLLEGE.*

BY ERSKINE MASON, M.D.,

ADJUNCT PROFESSOR OF SURGERY.

HAVING described the means employed for the purpose of effecting the reduction of a hernia, we shall, this afternoon, gentlemen, consider a little more fully some of the features of these operations, but more especially in reference to that one of not opening the sac. I shall preface these remarks by saying, that, perhaps, in the whole range of operative surgery, there is none of more interest to the surgeon, and upon the result of which depends so much the future welfare of the patient, as that which we resort to for the relief of a strangulated hernia. It, therefore, is essential for you all to thoroughly study this subject, no matter whether you intend to practise surgery or only desire to confine yourselves to the mere practice of medicine. So often, and that without the slightest premonitory symptom, may strangulated hernia occur, and so prompt in many instances should relief be afforded, that all who practise the healing art may be called to administer to a patient contending with this affection, and at a time and when circumstances do not permit of a surgeon seeing the case. Hence you should all be prepared, should occasion demand it, to give that relief to your patient which the knife often affords.

Some years ago, surgeons, when called upon to relieve a strangulated hernia, taxis having failed, would, after having divided the different layers of tissue surrounding the sac, proceed to lay open the sac and divide the stricture, and then, if the contents of the sac were found in a suitable condition, return them to the cavity of the abdomen; and even at the present time this is the more common custom. That the operation may be freed of many of the dangers attendant thereon, and the results prove more satisfactory by pursuing a different course, and one that is admissible in very many cases, I shall endeavor in this lecture to show you. I believe that the operation, without laying open the sac, is one that may often be performed with facility, and is applicable to many small as well as large herniæ, and should be more frequently practised than is the case.

Let us consider, first, what are the means which we may resort to in reducing a strangulated hernia, what are the dangers attending them, and how may these dangers be decreased, or in a great measure avoided? When called to see a patient suffering from a strangulated hernia, our first endeavor should be to restore the parts to their normal position, without having recourse to the knife, unless certain symptoms are present, which I have previously alluded to; and this is done by what is known as taxis, with or without the many adjuvants we may call to our assistance. In order that the taxis shall be of any avail, it should be applied in a scientific manner, and to do this requires, on the part of the operator, a thorough understanding of the anatomy of the structures involved in this disease, as well as the variety and kind of hernia which he has to deal with. The greatest care and delicacy of manipulation is requisite in the performance of this apparently, to some, simple matter. A cardinal rule in the use of this means is to induce that portion which has come down last to return first. That we are to derive great advantage from adjuvants in this proceeding, none who have had any experience in the treatment of this affection will deny. Position alone will often accomplish our object, without any resort to manipulations, and in some cases even after the taxis has proved ineffectual, the simple elevation of the foot of the bed has been known to cause the hernia to return. The warm bath, bleeding, the use of ice to the part, all hold an important place among what we call the adjuvants to taxis. But first among all stands anæsthetics. Well for the patient, and for the success of surgery, the use of emetics and tobacco clysters, and all that tends to prostrate the strength, have been banished from our list. But has taxis no dangers attendant upon it? is it never productive of harm? On the contrary, many a poor patient has had his doom sealed by this method, and the fatal result has been laid at the door of the cutting operation. The use of taxis, I feel confident, has done much to increase the mortality of this disease, and cause the results of the knife to assume so sad a place among the capital operations in surgery. I refer now to rough handling of the parts and the long-continued use of taxis in unskilful hands. The valuable time that is lost in these oft-repeated operations, and the injury the parts have received through such means, no surgeon will cease to regret or condemn. It cannot be doubted that in many cases the parts have been so contused and injured, that, no matter what operation is then resorted to, or how soon after such mischief has occurred, the chances of saving life, if not altogether destroyed, are greatly diminished. That accident of reduction *en masse*, which we spoke of the other day, is the result of an ignorant use of the taxis. If, then, the too frequent resource and prolonged attempt at taxis, even at the hands of one thoroughly competent to use it, may be productive of harm, the question arises, When shall we relinquish the taxis and resort to the knife? That this may often be a very nice question to decide, and one which the oldest head and most experienced hand may at times be in doubt about, I will freely admit. Before committing ourselves to any line of conduct, let me give you the opinions of some of those who have given attention to this subject, and recorded their ideas for the benefit of their professional brethren. Mr. Key, in speaking upon this subject, expresses himself thus: "I can scarcely press in too strong terms the necessity of an early recourse to the operation, as the most effectual method of preserving life in this dangerous disease." Mr. Pott thought that the operation, when performed in a proper manner and in due time, did not prove the cause of death oftener than once in fifty times; and he states that he has often had occasion to lament he had operated too late, but never of having resorted to the operation too soon; and closes his remarks with this sentence: "The delay of a few hours may cut off all hope of success, when a speedy operation might have saved the life of the patient." Sir A. Cooper believed that pain on pressure of the abdomen, and tension, were the signs that point to its immediate necessity. "Indeed," says he, "there is scarcely any period of the symptoms which should forbid the operation; for even if mortification has actually begun, the operation may be the means of saving life, by promoting the ready separation of gangrenous parts." Though the practice of

* January 30, 1874.

the older surgeons may have delayed the operation too long a time, owing to their regarding the knife in so serious a light, and as the last and almost hopeless resort, the verdict of modern surgery is almost unanimous in recommending a much earlier resort to the knife. That this is a correct view of the subject the record of cases at the London Hospital readily shows. The ratio of mortality increases greatly in proportion to the length of time that the strangulation is allowed to continue. Of 69 cases of strangulated hernia reported by Mr. Luke occurring in the above institution, and operated upon in the first 48 hours, 12 died, or 1 in 5.7; while of 38 cases operated on after more than 48 hours had elapsed, 15 died, or 1 in 2.5.

Cutting operations for the relief of the strangulation are two in number, known as the division of the stricture from within the sac, and that of division outside or external to the sac. The first of these is the old operation, and the one which thus far has had the most advocates, and is more frequently performed to-day in all cases than any other. Indeed, the merits or demerits of the other often appear to be unknown to many of the profession. That the operation of opening the sac is surrounded by many dangers, and is often entirely unjustifiable, I firmly believe. Now, what are the dangers and advantages which are attendant upon opening the sac? First, as to the dangers:

1. The great risk of wounding the gut, which is very great in the hands of inexperienced operators, and even those who are the most dexterous with the knife have met with this accident; for the viscera may be adherent to the sac at the place of incision, and thus be wounded; and this condition of the parts in very many cases cannot be determined beforehand.

2. After the sac is opened the gut may be injured by rising over the edge of the knife while we are in the act of dividing the stricture.

3. Some of the constituents of the spermatic cord, especially when they pass over the tumor, have been wounded, especially the vas deferens.

4. If the hernia is very large and irreducible, the contents are liable to inflame and cause fatal peritonitis.

5. In case of wounding any large artery, as the epigastric or obturator, the blood is liable to flow into the cavity of the abdomen, and by its presence give rise to fatal peritonitis.

6. The wound of the peritoneum may give rise to general peritonitis, even though this membrane is not already in an inflamed state.

7. The exposure to the atmospheric air of a congested or inflamed intestine, and the dangers which arise from the direct handling of the same.

This is a great cause of danger, and however strong the rules may be laid down against rough or unnecessary handling of the viscera, the tendency of some operators to finger the parts during all operations appears so irresistible, that all rules seem of no avail to shield the parts from dangerous meddling.

So much for some of the dangers attendant upon this mode of operation. Let us look at some statistics of the operation. Mr. Luke, in reference to this method, says, that out of 84 cases he opened the sac in 25, while in 59 the sac remained unopened. Of the 25 thus operated on, 8 died, whereas in the 59 upon whom the other method was used, only 7 died; and of 545 cases collected by Dr. Turner, and reported in Mr. Erichsen's work on surgery, 260 are said to have died.

The advantages claimed for this operation are as follows:

1. By laying open the sac we see the condition of the strangulated parts, and thus, if the gut be torn or in a gangrenous state, we are prevented from returning it.

2. That we are in no danger of reducing the parts still in a state of constriction, either by bands in the sac, or by the omentum being folded so tightly around the intestine as to be a source of strangulation.

3. That we can thus apply means for the restoration of congested portions of viscera.

These, I believe, embrace the advantages which are awarded to this operation; and without pursuing this method the operation for strangulated hernia would not be regarded by some as having been properly done.

With this reference to the old and most frequent operation, let us turn to the consideration of that which is more modern, viz., the operation "without opening the sac."

Franco and Parè were the first to cut without opening the sac, according to Mr. South in his notes to Chelius's System of Surgery, though to Jean Louis Petit belongs the honor of first recommending this operation. He described the operation, gave his reasons for adopting it, and answered objections raised against it. He performed the operation first in 1718, and advised it in not only old and large herniæ adherent to the sac, but also recommended its more general practice. Ravaton, in 1750, in his work on gunshot wounds, introduces it as a new operation, and mentions having performed the same successfully in three instances. The operation was also recommended in large and old ruptures by Sir A. Cooper. Though with such strong advocates, the operation appears not to have met with general favor. The revival of this operation was due to Mr. Key, who, in a clinical lecture delivered in 1829, drew attention towards it, and in 1833 gave to the profession his memoir on the "Advantages and Practicability of Dividing the Stricture in Strangulated Hernia on the Outside of the Sac."

In this work he strongly advises it as a general mode of operating. Mr. Luke also strongly advocated this method, and the results of his operation I have given you.

Mr. Erichsen, in his work on surgery, says: "I am decidedly of the opinion that this operation should always be attempted in preference to the ordinary one of opening the sac, in those cases in which the hernia has not long been strangulated, and presents no sign of the occurrence of gangrene in it, and more especially when it is femoral." In this country I am of the opinion that this operation is not the one that is generally resorted to.

The advantages claimed for this operation are:

1. The great simplicity warmly commends it.
2. The peritoneal cavity is not opened.
3. The peritoneum at the mouth of the sac is not wounded.
4. The diseased viscera are not exposed to the influence of the atmospheric air.
5. The fingers of the surgeon, or assistants, are prevented from directly handling the intestines or omentum.
6. In case there should be considerable hemorrhage, there is no danger of the blood entering the cavity of the peritoneum.
7. The danger of wounding the intestine is avoided.

Objections to the operation:

These are, in the opinion of some, that, 1. When there is a necessity for a cutting operation, the sac should be opened and its contents examined.

2. That the risk is very great of reducing the hernia, either strangulated by bands, adhesions, omentum, or by even the orifice of the sac itself.

3. The intestine or viscera may be in a state not to warrant its return to the abdominal cavity.

4. The difficulty of the operation itself.

In contrasting the merits and disadvantages of these two operations, in order to determine which should be the method employed in the great majority of cases, we are met with many difficulties, especially when we consult statistics. That the great difficulty lies in finding parallel cases, and that the period of strangulation at which the operations were done carry great weight with them, we are well aware; nevertheless, in this class of operations, as well as in others, we must refer to statistics to assist us in arriving at the advantages one operation possesses over the other.

Statistics of the two operations:

Where the sac was opened. Mr. Textor states that of 56 cases operated upon at Wurtzburg, between 1816 and 1842, 24 died, nearly one-half. Malgaigne states that of 220 cases subjected to operation in the Parisian hospitals, between 1836 and 1840, 133 died, or considerable more than one-half. Of 15 cases published by Mr. South, 6 died. Mr. Luke says of cases published in the British journals, "I some time since ascertained that one-half died." Of 65 cases operated on at the London Hospital, 22 died, or rather more than one-third of the whole number. Mr. Gay states that of 774 cases he has collected, 334 died. Dr. Frank H. Hamilton, in the Bellevue and Charity Hospital Reports for 1870, relates 31 operations for strangulated, inguinal, and femoral hernia; of these 15 died and 16 recovered; with one or two exceptions the strictures were divided within the sac.

That the mortality after this operation is often frightful, you see at once, and whatever mode of operation would hold out greater inducements of success should be welcomed as a great desideratum.

Statistics of the operation without opening the sac:

The greatest number of cases reported of this operation are those by Mr. Luke, who says, "I have attempted the performance of Petit's operation in 84 cases. Of this number the operation was completely successful, without opening the sac, in 59. In 25 it was necessary to open the sac to effect a reduction of the hernial contents, the opening in the sac generally varying in extent from one-half to one-quarter of an inch. With respect to the mortality among these patients: of the 59 in whom the sac remained unopened, 7 died; of the 25 in whom the sac was opened, 8 died. These cases included those of femoral, umbilical, and inguinal. In three of these cases he states that Petit's operation was successfully completed; but the sac was opened, after the reduction of the strangulated parts into the abdomen, to remove some doubts as to their perfect liberation. The proceeding in each case, however, was ascertained to be wholly unnecessary." The result of this operation, therefore, is most favorable when contrasted with those of the former method. Mr. Luke also states that this operation he believes to be more favorable in femoral than in inguinal. Thus, of 31 cases of femoral hernia it was successful in 24, being more than three-fourths of the whole number.

Now with regard to reduction by manipulation. *Taxis.*—That this is not without danger we have referred to in the beginning of this lecture, and Desault, in speaking of this, remarks with much truth: "Always think favorably of a case of strangulated hernia when the taxis has not been used." As we have given some statistics of the other operations, we deem it but right to refer to cases where the hernia has been reduced by this means alone. The following statistics are all we have been able to gather upon this subject: Mr. King states that of 40 patients relieved by taxis, 4 died; Textor, that of 114 patients relieved by this method, 9 died. Of 293 cases occurring in the London hospitals, between 1842 and 1847, 206 were relieved by taxis, among whom no deaths are recorded.

What, then, is the cause of the mortality being so great in this disease? The principal cause is peritonitis; and that the time which has elapsed from the commencement of the trouble to that of the operation, has a great bearing upon the favorable termination of the case, is also evident. The longer the delay the greater the mortality, will ever be the rule; that death occurs not only from peritonitis and gangrene of the parts, but from extreme prostration, the result of excessive vomiting, or the effect produced upon the nervous system by a portion of the intestine being constricted, and that without apparent lesion taking place, you should also bear in mind; and I have no doubt but that the mortality following the use of the knife is often due to the exposure and handling of the intestine. It also seems reasonable to think that the wounding of the irritated if not inflamed peritoneum, and the admission of atmospheric air into the peritoneal cavity, may also tend to expedite a fatal issue.

The great objection with which we are met by the advocates of always opening the sac, is the danger of reducing the parts in an unfit condition. That the time a part has been constricted will not always be a sure indication of its condition, is very true; for we see cases where, though the bowel has been strangulated but a few hours, it is found to be in a gangrenous state. Yet, on the other hand, cases are met with which have been suffering from strangulation for days, in which the intestine assumes the normal state after the stricture is relieved. In a majority of cases the condition of the tumor, we should judge, could be ascertained by the condition of the tissues divided in the operation, as well as the appearance of the sac, and the view we obtain of the contents through the same. Should you find the parts doughy, and the elasticity of the tumor to be absent, the sac to have lost its wonted glistening appearance and present a darkened look, and should a fecal or gangrenous odor be added to this, you should expect to find the bowel lacerated or in a mortified state, especially if after the stricture be divided, and the usual remedies for the restoration of the vitality of the parts (such as sponges wet with hot water applied to the sac) should fail. That such restoratives will succeed in restoring the intestine to its natural color, when applied to the sac, after the stricture has been divided, we have verified in our own practice. Let us suppose, now, that we open the sac and find the intestine livid, or of a dark chocolate hue, with spots of ecchymosis upon its surface; it will be difficult for you to decide, at times, whether or not the intestine should be returned to the abdominal cavity. I recall to mind a case where several surgeons of great eminence were at a loss to decide upon the proper course to be pursued in just such a case, some inclining to the opinion that to return the part would be fraught with danger. The intestine was returned, however, and the woman recovered. This case only goes to show that surgeons of equal experience, and regarded by the profession as exercising sound judgment, would often be led to adopt different measures in similar cases. And if the parts are finally restored to their natural position in such cases, the opening the sac appears to us only to have entailed an additional danger. We strongly believe that the cavity of the abdomen is the safest place, and the one holding greater inducements to recovery, for a portion of bowel greatly discolored, ecchymosed, and almost gangrenous. The opening of the sac is said also to assist nature to form an artificial anus, should rupture of the bowel

take place; that the not opening the sac will not prevent this, has been proved by published cases, and I have seen it verified in my own practice. All resort to the taxis first, yet we know that death has occurred after reduction in this manner, and the bowel has been found discolored and softened; still, little or no objection is made to taxis being tried first in a case of strangulated hernia! Of the 293 cases reported by Mr. Luke, as having been reduced by taxis, none died. Surely some of these cases, if not all, at that time, it may be presumed, were in a condition that, if operated upon, it would have been deemed necessary to have opened the sac and examined the contents, and some perhaps looked upon as being unfit to be returned to the abdominal cavity. Now, would we have had no deaths among those 293 cases of strangulated hernia had the sac been opened? The dangers of reducing the gut, still strangulated, by leaving the sac unopened, we do not believe to be very great; indeed, all the cases that have been reported thus reduced, we think, with but few exceptions, have occurred from the use of taxis alone. Again, when the constriction is produced by bands within the sac, or from folds of omentum, the sac, we should judge, except in *very rare* instances, *must be opened* before reduction can take place; in such cases, therefore, when we have exposed the sac, I do not see how the accident referred to above would very likely happen.

Some of the opponents to the not opening the sac have advanced, as an argument against it, the difficulty of the operation itself, especially in the hands of those inexperienced. I do not think that this operation will often be found a difficult one, though we are fully aware that attempts have been made to do the operation by skilful hands, and the sac has been accidentally opened. Yet, rather than being an unsafe method for those who are not used to the knife, we believe it the safest operation for them to practise. To those who operate for the first time, it is well to bear in mind the rule laid down by Mr. Key in speaking of the femoral variety. He says: "The point of the director should be applied rather to the inner than to the outer part of the neck of the sac, as it will be found more easily to pass under the stricture at this part. It should not at first be attempted to be thrust under the stricture, as the firmness of the parts forming the stricture would resist it. But the seat of the stricture being felt, the operator should depress the end of the director upon the sac, which will yield before it, and then, by an onward movement, the director slides under the stricture."

I think I have shown you that the operation without opening the sac, as a rule, is surrounded with *far less* danger to life than where the sac has been laid open. Though strongly advocating the operation of Petit, I do not wish you to understand that I urge the adoption of it in every case and at all hazards. Perhaps it will be found applicable more frequently to femoral herniæ than to inguinal. In umbilical or ventral it seems appropriate.

There are but few cases in the whole range of herniæ which call for the use of the knife, that will not, we believe, admit of the trial of this method, which entails few if *any* more dangers to a healthy subject than the employment of taxis. Should this fail, we have done nothing to place the life of our patient in jeopardy, and we may then resort to the opening of the sac.

In the division of the sac I would advocate as small an opening as possible, both in dividing the stricture and in examining the contents, and, above all, an abstaining from manipulating both the sac and viscera as much as possible.

The advocating of Petit's operation naturally engenders a belief in the propriety of early resorting to the cutting operation in cases of strangulated hernia. That many valuable lives are sacrificed by delaying an operation, and precious time lost in resorting too long to the use of such adjuvants as opium, injections, cold applications, and hot baths, and even in taxis itself, we firmly believe. Especially to the unwary the use of opium is attended with danger. This is too apt to deaden pain and deceive both the patient and physician as to the true condition of the hernia, and thus give time for the disease to accomplish irreparable mischief. The use of the warm bath, injections, position, and ice applied to the parts, with the taxis, will often succeed in relieving our patient; but we may lose our only chance of safety by delaying too long with these measures.

The safest practice you can adopt, when called to a case of strangulated hernia, is to place the patient thoroughly under the influence of ether, and after a careful attempt in the use of the taxis—the body being elevated, and all that position can do being called to our aid—then, if we fail at reduction, proceed *at once* to the operation without opening the sac—if not contra-indicated—and if division of the sac becomes necessary, make *as small* an opening as the case will admit.

Original Communications.

CASE OF MASTOID INFLAMMATION—PERFORATION OF MASTOID PROCESS—RECOVERY.

By H. G. NEWTON, M.D.,

BROOKLYN, N. Y.

Mrs. D., æt. 32. I was called to see the patient January 17, 1873. She had suffered for five weeks from inflammation of the mastoid cells of the right side. She had been treated by leeches and anodynes. The pain was referred to the occiput and vertex, the patient walking the room pressing her head with both hands. She was dizzy at times, but showed no other signs of cerebral affection. She had an anxious countenance, and was very nervous, due probably to lack of nourishment and sleep, and to the great pain continued through five weeks. Tongue heavily coated, no appetite, and a tendency to constipation. Upon the removal of pus from the meatus, a granulating mass was revealed, projecting from the lower posterior wall at a point one quarter of an inch exterior to the drum membrane. The membrane itself was not perforated. Air passed freely by catheter into the tympanum, with no moist râle. When the granulations were touched with a probe, intense pain radiated over that side of the head. The region of the mastoid was not painful under pressure—slightly so upon percussion. Patient heard a distinct whisper at five feet.

Ordered two leeches, frequent douching with hot poppy-head infusion, liq. opii comp. at night, and the following: ℞. Quiniæ sulph., gr. xv.; sodæ bicarb. pulv. rhei, ää ℈i.; pulv. ipec., gr. iv. M. et div. in chrt. No. xv. S. One powder three times a day. Granulations touched with sol. nitr. argt. (gr. 120 to ℥i.).

The patient improved under treatment, tongue became nearly clean, appetite increased, and yet more or less pain continued through the month following; the granulations disappeared, leaving a red, shining,

nipple-shaped prominence, from the apex of which oozed very slowly a creamy-looking pus.

Upon the Valsalvian experiment the pus could be forced out a little faster, and at times this also occurred when the catheter was used. The discharge was at no time abundant, but when greatest the patient felt comparatively well; if at any time it ceased, the severe pain returned. Hearing distance remained the same as at first. There continued to be no tenderness upon pressure over the mastoid.

On the 17th of February I found the patient suffering greatly, and there was slight tenderness of the mastoid one inch from the tip. On the 19th, the symptoms remaining the same, it was decided, with the concurrence of Dr. Roosa, to perforate the mastoid process, and this was done with the kind assistance of Dr. R. and my colleagues of the Brooklyn Eye and Ear Hospital. An incision one inch in length was made, commencing at the tip of the mastoid and carried upward, and the periosteum freely divided. No roughened bone was found. A perforation one and a half lines in diameter was carefully made in the median line of the process, half an inch from the tip, the drill being directed slightly upward and forward. When cancellated structure was reached, a bent probe was carefully introduced in the direction of the fistulous opening in the meatus, hoping not only to reach pus, but also to carry a seton through to the opening. In both respects we failed, and were obliged to content ourselves with introducing a tent into the perforation and the external cut.

The tent was removed from the bone on the second day, and not reintroduced. The incision was torn or cut open daily until the first of April, when the patient was so much better that I thought it safe to allow the incision to close. Her condition had been varying, but gradually improving during this period. The hearing distance gradually increased, so that she could hear a distinct whisper at twenty-five feet. The hearing distance has remained the same up to the present time (Jan. 1), and the patient has been entirely well for months.

Remarks.—The foregoing case presents two or three features worthy of attention: First, the membrana tympani was intact; second, there was scarcely any tenderness upon pressure or percussion over the mastoid region, and no periosteal disease, or disease of superficial parts of bone, was found; and thirdly, there was no escape of pus, though the cancellated structure was well opened. These features are not peculiar to this case, but I think they are worth noting.

In many of the cases reported there has been no question as to either the propriety of operating, or the place at which the perforation should be made, for in many of them pus had already accumulated beneath the integuments, and a fistulous opening or a honeycombed condition of the bone was found upon making Wilde's incision.

In the foregoing case there was no doubt concerning the involvement of a portion of the mastoid cells, and the intense suffering of the patient and the continuance of the disease seemed to indicate operative interference. Yet I do not attribute recovery to the perforation of the mastoid (although that may have been a factor in the healing), but chiefly to counter-irritation caused by a free incision opened daily for six weeks. In another such case, however, I should not hesitate to operate, but would make my perforation at the point directed by Dr. A. H. Buck in his excellent article on "Diseases of Mastoid Process" (*vide Archives of Ophthalmology and Otology*, vol. iii., No. 1), namely, behind the external auditory canal, at a point one quarter of an inch distant from it, and a little below the level of its upper wall. "The drill should be rotated in a direction inwards, forwards, and a little upwards; that is, nearly parallel with the canal."

Schwartze and Eysell (*Arch. für Ohrenheilkunde*, second vol. of new series) prefer to make the opening with a bone-gouge at a point a little higher than that indicated above, as the mastoid antrum lies somewhat higher than the external meatus, and in order to reach it the chisel must be placed upon the bone below the *linea temporalis*, and inclined at an angle of about 45° to the horizon, and worked inward, downward, and forward. Tröltsch (the last Am. edition, by Roosa) says: "The instrument is placed on the bone, on a level with the upper border of the outer meatus, from one-fourth to one-half an inch behind the attachment of the auricle, and is worked slightly forward in a horizontal direction."

In the case reported I was deterred from perforating at one of these points by an examination of several temporal bones that were within my reach; for out of these, seven in number, there were two in which it would have been utterly impossible to have perforated at the points mentioned without penetrating the fossa containing the lateral sinus, the fossa being so deeply excavated that only a thin partition of bone was between it and the external surface. In one, indeed, where there was apparently a fine development of the mastoid process, and no external indication of the great depth of the fossa, the bone was translucent.* This accords with the fact that occasionally in operating the fossa is reached rather than the mastoid antrum, an occurrence neither to be foreseen nor avoided.

In the cases for which this operation is, at the present day, undertaken, now and then one *might* recover under the most active counter-irritation, but the danger to life is so imminent that delay should not be thought of. The surgeon should, however, bear in mind the possibility, just suggested. Fortunately, if the operation is carefully conducted, exposure of the dura mater does not seem to be a very dangerous accident.

In many cases of mastoid inflammation there is a condensation, or even eburnation, of the osseous tissue. In similar circumstances, where there is no great solidifying of the cancellæ, I conceive that an abscess in the mastoid may be entirely separated from portions of the cancellated structure by throwing up a wall of neoplastic tissue between it and them, or by filling the cancellæ nearest the abscess with dried pus; and that, consequently, we may reach that structure in operating without meeting any pus.

CASES IN WHICH FULLERS' EARTH ACTED AS A SUCCESSFUL SURGICAL DRESSING.

By FREDERICK WILLIAM GODON, A.B., M.D.,

LATE INTERNE ROTUNDO LYING-IN HOSPITAL, DUBLIN, IRELAND.

I BEG leave to present the following cases as the result of the earth-treatment, not that I intend to enter into any discussion upon this mode of surgical dressing, as has already been fully and elaborately done by my friend Dr. A. Hewson, of Philadelphia.† The following cases may be of some interest to the profession in New York, as this mode of treatment is not generally resorted to by surgeons here, and indeed has only

* I exhibited these bones at the meeting of the N. Y. Ophth. Soc., in Nov., 1873.

† "The Use of Earth as a Topical Application in Surgery," by Addinell Hewson, M.D., one of the attending surgeons to the Pennsylvania Hospital, 1872.

been, I believe, but very imperfectly tried at Bellevue Hospital some three years ago.

CASE I.—A. G., a widow woman, keeping a boarding-house in the city, æt. 33, a native of the United States, had been suffering for nearly two years from a varicose ulcer of the lower third of the left leg, on the inner side. Her appearance when I was called to see her was that of a healthy woman; but her history was imperfect, as she did not choose to be frank and candid with me. She was the mother of three healthy children. She had been attended by some physicians during this time, and all kinds of treatment, constitutional as well as local, had failed to produce any favorable impression on the ulcer, which finally became so painful as to cause her to confine herself to her bed. The patient informed me when I first saw her that she had noticed no great increase in the extent of the ulcer for the past eight months, but that it had gradually grown deeper, and that each day it was becoming more offensive. She had been in the habit of washing it carefully morning and night. When I first examined the leg the ulcer was as large as the palm of her hand, with callous edges, and a grayish, shreddy surface. The veins of the leg were considerably enlarged. At this time she had been confined to her bed for five days, and suffering great pain. I applied, at my first visit, iodoform in powder to the ulcer, strapped the part firmly, and bandaged the leg from the toes to the knee. I continued this treatment for five days, during which time the patient kept her bed, suffering great pain. The iodoform had the effect of cleaning off the sore nicely, but it showed no signs of healing at this time. The pain, however, which the iodoform produced was most intense, destroying her rest, and causing her continually to complain of burning in the leg. On the sixth day I gave up its use and applied dry earth. This gave her entire and immediate relief, and she passed the following night comfortably. She felt much refreshed on the following morning, and told me that she had felt no pain whatever in her leg since the application. She was in good spirits, had eaten a good breakfast, and seemed much encouraged. The dressing was then washed off with castile soap and warm water, the ulcer presenting a clean surface, and gave no pain whatever. I then applied earth, moistened with water, in the form of a paste, covered the part with waxed paper, and over this a firm and even strapping and a roller bandage. The patient was ordered to still keep her bed. No pain whatever succeeded the dressing. She rested well that night, and expressed herself as feeling perfectly comfortable on the following morning. On the next day, the fourth on which the earth had been used, I applied it in a fine powder, covered with waxed paper, strapped firmly, and applied the roller. Still no pain in the part. The next morning, at my visit, I found a bridge of tissue was forming across the centre: finely-powdered earth applied, and the dressing continued as before. Sixth day: bridge across the centre complete, and the part cicatrizing rapidly. The treatment was continued. On the eighth day of the use of the earth the patient begged to be allowed to leave her bed and occupy her lounge. I consented to this, and nothing unfavorable resulted from the indulgence; treatment continued. On the tenth day the ulcer was reduced to a small point, and under the daily application of the dry earth, dressing, washing, strapping, and bandaging, on the thirteenth day the cicatrization was complete.

CASE II.—J. F., a tinsmith, æt. 47, came to my office and showed me a varicose ulcer of the left leg, of seven weeks' standing. The veins of the leg were considerably enlarged. The ulcer was much inflamed, and very dirty. The patient was well nourished and healthy in appearance. He denied ever having had syphilis, but confessed that he had had gonorrhœa some ten years before. He was not intemperate, nor would he acknowledge himself guilty of any great excess. He was the father of two children, who had always enjoyed good health. I applied a dressing of wet earth, strapped the ulcer firmly and evenly, and a roller bandage from the toes to the knee; told him to go home and keep his bed. On measurement, the following morning, I found the ulcer to be $1\frac{1}{2} \times \frac{1}{2}$ inches. It was washed with castile soap and warm water, and dry earth, finely powdered, applied, strapped and bandaged as before. The ulcer had been giving the patient previously so much pain that he willingly had consented to give up his work and remain in bed. The pain had entirely ceased after the application of the earth; and on the following day I found him sitting up, and very comfortable, and feeling able, he said, to go back to his work. I kept him quiet, however, during the following four days, until, under the dressing and treatment, the cicatrization was complete.

CASE III.—Mr. J., from Boston, sent for me to visit him at his hotel (Hoffman House), and showed me a carbuncle which had been about two weeks developing itself. He was suffering intense pain, and was unable to obtain any sleep the previous night; indeed, he told me he had been able to obtain but little sleep during the entire time of its development. He had been applying poultices to it for more than a week. He did not claim to be a temperate man, but usually enjoyed good health. There was some pus coming out of two openings in the centre when I first saw him. The induration of the cellular tissue was considerable at its base. I made a crucial incision through the carbuncle, down to the healthy tissue beneath, without the use of an anæsthetic, and filled the wound with finely powdered dry earth. After the agony caused by the incision, the relief this application gave was very great. The patient slept soundly that night, and was sitting up on the following morning when I visited him. The earth was then washed off. The slough was seen to be protruding, and the tissues were contracting vigorously. I reapplied the dry earth, and retained it by a covering of waxed paper and a few straps. On the evening of the third day after the incisions were made, they had greatly diminished in extent. Dry earth was reapplied, and the wound dressed as before. On the fifth day I removed a portion of the core, as it was projecting, and dressed the wound with dry earth as before. On the seventh day, a clean excavated ulcer occupied the position of the carbuncle, and four days after, the surface had filled up to the level of the surrounding tissue. Cicatrization progressed rapidly under the same kind of dressing, and four days later the patient returned to Boston with all evidences of his former trouble removed, with the exception of a small granulating spot, which disappeared a few days after the patient reached his home.

66 WEST 36TH STREET, NEW YORK.

CASE OF LUMBAR HERNIA.

BY WELLINGTON N. CAMPBELL, M.D.,

SENIOR ASSISTANT TO RECEPTION HOSPITAL, WEST 99TH ST., NEW YORK.

THOMAS WHELAN, four years of age, born in this city, was brought to the out-door dispensary of this hospital on the morning of November 22, 1873, for the treatment of an abscess, as the father called it.

We were directed to the spine as the seat of trouble, from the peculiar aspect of the patient, which is so characteristic of spinal disease. On examination was found a convex curvature of the spinal column, at about the middle of the dorsal vertebra, which was first noticed by his parents two years ago, and which very gradually increased in size. Eighteen months ago an abscess formed in the left loin, between the crest of the ilium and the last rib. After attaining a considerable size, it was lanced by a surgeon in attendance, and much pus discharged therefrom. A poultice was then applied, and it continued to discharge up to the 1st of last May, at which time they discontinued the poultice, and the wound closed. One month following the closure of the wound, another tumor made its appearance, which gradually increased, and the father, deeming it advisable to have it lanced as before, brought his child to this dispensary. The tumor was found to be situated at that point where the quadratus lumborum and latissimus dorsi intersect the external and internal oblique muscles. It was then about the size of a goose-egg, soft and fluctuating to the touch; tympanitic resonance was obtained on percussion, and, upon performing taxis forward and inward, it was reduced, followed by a rumbling or gurgling sound, reappearing upon the patient's coughing or making muscular exertion.

From these and other familiar signs it was diagnosticated to be a lumbar hernia, due, in all probability, to disintegration of the muscular fibres of these muscles, owing to the long-continued discharge from the abscess above mentioned. After reduction was accomplished, a compress and bandage were applied to retain the intestine in place. The case was presented to Prof. Mott, at his clinic at Bellevue College, on the following Wednesday, and he confirmed the above diagnosis.

In looking over the literature of the subject, I find that Gross (System of Surgery) makes mention of but four cases of lumbar hernia, Holmes of one, and Erichsen of none. Gross, vol. 2d, page 559: "Lumbar hernia is extremely infrequent, the only cases hitherto reported being those of Petit, Pelletau, Cloquet, and Chapplain." Holmes: "In the third Bulletin Travaux de la Société de Médecine de Marseille, Dr. Chapplain* relates the case of a man, aged sixty, who, after being squeezed between a wall and a carriage, found in his loin a tumor, between the crest of the ilium and last rib. It appeared at first like a chronic abscess, but the presence of intestine was easily ascertained." Mr. Kingdon has seen a case of this kind; the bowels protruded just above the crest of the ilium at its highest point, about three inches from the spine, just where the quadratus and abdominal muscles meet. The man was forty-five years old, tall and thin. He suffered with hæmoptysis and emphysema of the lungs.

I take the liberty of publishing this case for three reasons. 1st, On account of its rarity. 2d, On account of the peculiar circumstances under which it occurred. 3d, The imminent danger that would necessarily follow the opening of a tumor of this nature.

ALBANY MEDICAL COLLEGE AND HOSPITAL.—Professors A. Van Derveer and J. M. Bigelow have resigned their respective chairs in this College, and also their positions in the hospital. Drs. John Swinburne and Thomas Becket have also resigned their positions in the latter institution. It is also reported that Professors Peaslee and Clymer, of this city, have declined to lecture in the College.

* One of the four cases mentioned in Gross.

Reports of Hospitals.

CHARITY HOSPITAL.

NOTES OF PRACTICE AND PECULIARITIES OF TREATMENT.

PNEUMONIA.

THE remedies commonly employed in this hospital in the treatment of pneumonia are quinine, carbonate of ammonia, and the alcoholics; occasionally, if the fever is too brisk, liq. ammon. acetatis is administered. The oil-silk jacket is uniformly adopted. Quinine is administered from the beginning. Alcohol, as a rule, is early resorted to. Carbonate of ammonia comes in before the second stage becomes completely developed, and is continued throughout the remaining portion of the course. Diet includes hospital extras. An effort was made by one of the visiting physicians to withdraw, somewhat at least, from this highly tonic and stimulating plan of treatment. Accordingly, liq. ammon. acetatis and tincture of aconite were recommended as the chief remedies to be employed during the earlier part of the disease; but the experiment proved so disastrous, the rate of mortality increasing so rapidly, that the attempt at reformation was at once abandoned.

The constitutional condition of the patients who find admission to this hospital doubtless has a controlling influence upon the treatment necessary to be adopted in this class of diseases, if the best results would be obtained.

EXPECTORANT MIXTURE.

An expectorant mixture very commonly used in cases of chronic bronchitis, and with very good results, is the following:

℞. Ammon. muriat.,
Liq. morph. sulph. (Mag.) ää.... ʒ i.
Syr. tolu,
Syr. scillæ co., ää..... ℥ i.
M.
S. ʒ i. t. i. d.

NIGHT-SWEATS OF PHTHISIS.

House-Physician Smith remarked that two-grain pills of oxide of zinc, t. i. d., has answered a better purpose in his division for controlling this symptom than any remedy that had been employed.

ACUTE ARTICULAR RHEUMATISM.

Dr. Smith also directed my attention to an external application to be used for the joints during the progress of this affection. The following is the formula:

℞. Tr. opii..... ℥ i.
Spts. chloroform..... ʒ iss.
Lin. saponis, ad.....Oi.
M.

This liniment is applied freely over the joints, and immediately covered with cotton and oil-silk. The relief from pain afforded by this application has been very gratifying to all his rheumatic patients. The general treatment is alkaline.

IRRITABLE STOMACHS.

The case to which my attention was directed was one in which the ordinary irritability of stomach associated with phthisis required special treatment. The method of treatment, however, is almost uniformly adopted when an irritable condition of the stomach manifests itself in connection with *any* chronic disease.

The remedy is *raw beef*, chopped fine and seasoned with salt, pepper, and vinegar. The patient is to subsist entirely upon beef prepared in this manner. Dr. Smith remarked that this plan had, in his wards, seldom failed to afford relief to this condition, when associated with any chronic affection.

SILICATE OF SODA IN THE TREATMENT OF FRACTURES.

House-Surgeon Pierce informed me that he had employed the silicate of soda in his division in the treatment of fractures equally as much as he had employed PLASTER-OF-PARIS. The soda splint has furnished very pleasing results, and, when carefully applied, makes a most elegant and serviceable splint. Three bandages are ordinarily used, the limb being coated over with the silicate after the application of each bandage. It is also well, and perhaps always advisable, to add narrow strips of pasteboard as the bandages are being applied. Extension, in the proper direction, must be maintained until the splint is thoroughly dried.

ACETIC SPRAY IN DIPHTHERIA.

Diphtheria, scarlet-fever, typhus and typhoid fevers, and small-pox, constitute a group by themselves.

By present arrangement this department falls under charge of the hospital staff, as one of the branches of "Out-door Service." Dr. Partridge, house-physician, mentioned that with regard to diphtheria very satisfactory results had been obtained in the local treatment of the disease by the use of acetic acid, in solutions of varying strength, in the form of spray. The remedy is used by means of the so-called atomizer. It seems to have the power to dissolve the membrane, and in several cases where well developed and somewhat advanced croupy symptoms were present, all were relieved, and that quite speedily, by the use of this agent. The administration of alcoholics is governed by the condition of pulse and temperature. The rate of mortality is small.

ITCHING AND PITTING IN SMALL-POX.

To relieve the intense itching which attends this eruption, washing the surface with glycerine and water acts as if by magic.

To prevent pitting, one of the visiting physicians recommended the use of tr. iodine. The remedy should be employed, if possible, before vesicles are formed. It is to be applied once a day. The effect of this remedy has not been sufficiently noted in the Small-pox Hospital to warrant any conclusions relative to its value in this direction.

It was used in one case after the eruption had been vesicular for one or two days, but before it had become pustular, and only a moderate amount of pitting followed. Whether the adoption of an *ectrotic* plan of treatment will not do the patient more harm than can be counterbalanced by the benefit arising from a moderate arrest of pitting, or even a complete prevention of pitting, is, in many cases, thought to be a question worthy of consideration.

To prevent the formation of abscesses, the combined hypophosphites have served a very excellent purpose. One patient had eight abscesses, and another four, at various situations upon the body, and all had rapidly healed under the influence of this combination treatment. In several instances threatened formation of abscess had been dispelled. The influence of this remedy, therefore, was looked upon with favor, for the reason that abscesses under such circumstances are not infrequently attended with *grave* results.

BELLEVUE HOSPITAL.

SECOND MEDICAL DIVISION. DR. FARRINGTON, HOUSE-PHYSICIAN.

HEMORRHAGES.

THIS class of difficulties, such as hæmoptysis, hemorrhage from bowels, hæmaturia, hæmatemesis, and hemorrhages from the uterus, are treated upon this division most satisfactorily by the use of spirits of turpentine. The remedy is commonly administered in ten-drop doses, repeated every two hours.

IODIDE OF POTASSIUM IN ANEURISM.

Our attention was directed to a case of thoracic aneurism, in which nearly all the distressing symptoms had disappeared since the patient had been placed upon large doses of iodide of potassium.

CHRONIC BRIGHT'S DISEASE.

The water-treatment for this affection, referred to in another report, is at present regularly adopted, and the patients do exceedingly well.

If vomiting is developed, ice taken by the mouth constitutes the main reliance for its arrest.

If headache is present, hypodermics of morphine are administered.

If convulsions are threatened or developed, hypodermics of morphine are resorted to for their control.

In general, the diet of the patient is to be sustaining, and milk is a most excellent article of diet, if it can be obtained pure.

PNEUMONIA.

Quinia will reduce the temperature and pulse of pneumonia with a good deal of certainty.

Such an effect is beneficial.

It requires large doses to accomplish this. It is customary to give pneumonic patients grs. x. in the morning, and grs. xv. at night, or grs. x. morning and night.

CARBOLIC-ACID OINTMENT FOR SCABIES.

Its success warrants farther trial.

MONARTHRITIC CASE.

Cardiac complication had occurred since admission to the hospital.

The case shows the importance of correct diagnosis, in order that the patient may receive the greatest benefit from treatment.

HEMORRHAGE FROM THE LUNGS.

There were some features of interest in connection with this case. The patient was æt. 28, single, and a domestic. Mother died of consumption. One year previous to her admission, suffered from a sudden attack of hemorrhage from the lungs. Soon after she began to lose strength, had night-sweats, and lost her appetite. Pain, especially beneath the scapula. Has suffered from several severe hemorrhages. She has mitral regurgitation.

Hæmoptysis with mitral regurgitation is a point of interest.

Mitral obstruction is the usual cause of hæmoptysis when dependent upon cardiac disease.

If the hemorrhages are profuse, it is hardly warrantable to conclude that they are due to cardiac lesion.

If regurgitant lesion alone exists, it is never warrantable to say that the hæmoptysis is dependent upon a cardiac cause.

The patient has improved since her admission to the hospital.

IMPROVEMENT IN A CASE WHERE THERE HAS BEEN REPEATED AND PROFUSE HEMORRHAGES FROM THE LUNGS.

This is another point of interest.

In general, patients do better when hemorrhages from the lungs occur, if they are phthisical patients, and they are also rather more likely to recover than those who do not have such hemorrhages; or, if they do not recover, they are apt to have an arrest of the disease. These facts can be used for the encouragement of patients.

Such were some of the interesting features of the case we were visiting, as drawn out by the Visiting Physician.

Surgical Division.

FRACTURE OF FOREARM.

The case was one in which an old fracture had united with great deformity. The patient was placed under the influence of ether, and the bones were rebroken.

The following dressing was applied, which Prof. Sayre employs in the treatment of all fractures of the forearm. First, prepare two pieces of board (cigar-box answers a good purpose), somewhat wider than the forearm, and of sufficient length to reach from the palmar surface of the hand to near the flexure of the elbow. Next, prepare two pads of adhesive plaster for the interosseous spaces, which is done by rolling adhesive plaster, with the plaster side out, until a pad or roll is obtained about half an inch in thickness. These are to be of the same length of the forearm. Next, prepare two compresses of adhesive plaster, plaster side out, and two inches square, which are to be applied above and below the point of fracture. Next cut two long strips of adhesive plaster, which are to be used in retaining the splints in position.

The apparatus is now ready for adjustment. It is adjusted in the following manner: place the forearm at right angles with the arm, with the palm of the hand looking towards the mouth of the patient. Next, direct an assistant to take hold of the arm, just above the elbow, for the purpose of making counter-extension; then you will yourself, or have an assistant, seize the hand, and make extension until the bones are placed in their proper position and hold fast. One roll or pad of adhesive plaster is now to be placed over the interosseous space upon the anterior aspect of the forearm, and the remaining pad or roll is to be placed in a corresponding position upon the posterior aspect. Next, place one of the square compresses just above the fracture anteriorly, and the other just below it posteriorly. These compresses are to be placed over the interosseous pad or roll. Then place the two pieces of board immediately against the two interosseous pads upon the forearm, and secure them snugly at the upper and lower extremities, and perhaps at the middle portion, with the long strips of adhesive plaster. The splints are to be applied immediately over the adhesive pads and compresses, without any covering whatever. In this way they are held firmly in position by the adhesive plaster. The principle involved in the treatment of this fracture, says the Professor, "is that which should guide you in the treatment of all fractures, namely, extension and counter-extension in the proper direction until the muscles adjust the broken fragments with *perfect accuracy*, and then no more extension and counter-extension, but retention."

Army Staff Rank.—The New York Academy of Medicine, New York Pathological and New York County Societies, and New York Medical Library Association, have passed resolutions favoring the Army Medical Staff Rank Bill.

BROOKLYN CITY HOSPITAL, BROOKLYN, N. Y.

COMPOUND DISLOCATION OF RIGHT KNEE.

While the patient was aloft, adjusting some machinery, he was caught by a revolving wheel, throwing him some distance; picked up with the above injury.

The displacement was tibia and fibula forwards, femur backwards, condyles exposed through popliteal space. Three (3) inches shortening, arterial circulation of leg intact, muscles of the thigh were in a very flaccid condition.

Dr. Speir amputated at thigh.

COMPOUND DISLOCATION OF RIGHT ASTRAGALUS.

The injury was received from patient slipping upon sidewalk, foot being twisted in, astragalus thrown forwards and outwards; considerable laceration of tissues. Patient was not admitted into the hospital until eight days after reception of the accident, the limb then presenting an unhealthy condition. Dislocation unreduced.

Dr. Speir resected the astragalus. There is now slight motion between the os calcis and tibia, and the patient is improving in the use of the foot.

DISLOCATION OF SIXTH AND SEVENTH DORSAL VERTEBRÆ.

In speaking of serious dislocations, there is one of the above in the house. The accident was received from falling through five (5) hatchways. No other injury was sustained. He presents all the symptoms of this lamentable accident, but has now been lying upon a water-bed for 90 days, and to all appearances is in a far better condition than he was one month ago. The patient is kept partly under the influence of morphia.

FRACTURE OF BASE OF SKULL, RUPTURE OF MIDDLE MENINGEAL ARTERY, AND MENINGITIS, CAUSED BY A FALL OF FORTY-FIVE FEET.

The interesting fact in this case was the entire absence of all signs of compression until five (5) days after admission, the day before he died, when slight stertorous breathing, with facial paralysis, and anæsthesia of the eye, pupils moderately dilated, were noticeable, and finally complete coma, in which the patient died. Autopsy revealed comminuted fracture of petrous bone and fracture at base, with clot outside the dura mater, at the point of rupture of middle meningeal artery. The fluid discharged from ear was spinal in character.

FRACTURE OF STERNUM.

There is one case of this kind in the hospital at present. The accident was received from caving in of an embankment. The seat of fracture is at the articulation of the manubrium and gladiolus, the upper portion being considerably displaced backwards.

It is treated by a compress and roller bandage surrounding chest and that portion of sternum below the fracture, so as to enable the respiration to be abdominal as much as possible.

FRACTURE OF PATELLA.

The method of treatment at present is to keep the leg well elevated, and, as soon as the inflammation has subsided sufficiently, place a small pad surrounding the fractured patella. A broad piece of adhesive plaster, its lower border cut to fit the upper margin of the patella, with two straps sewed to it, is fastened to the anterior aspect of the thigh. A similar piece is applied to the leg, with buckles attached.

By means of the strap and buckles the fragments are kept in apposition, and as the swelling subsides they are gradually tightened.

The leg is kept in this manner, well elevated, for at least three (3) weeks, when a strong posterior plaster splint is applied.

We have one case in the wards who has had 3 consecutive fractures of the same patella within the past six (6) years.

FRACTURE OF SUPERIOR MAXILLA.

A particular feature in one of the cases was the amount of displacement, and the good result obtained by wiring the teeth and placing a gutta-percha splint between the upper lip and superior maxilla. The ends of wire from the teeth were brought through holes in the splint, and twisted to one another upon its anterior surface.

The patient has good use of both maxillæ during the treatment.

FRACTURE OF FEMUR.

Noticing Buck's extension and the quadruple splint in the wards, reminds us of the fact that, during the present service, and from past experience, better results are obtained than in the hurried application of plaster splints.

FRACTURE OF TIBIA AND FIBULA.

Our attention is called to five cases. The method of treatment in these, as well as in all other fractures, is to wait until the swelling has subsided, and then apply plaster splints, which, by the way, have been used in this hospital for the past eight or nine years. In these particular cases anterior and posterior splints of a reasonable thickness are employed; the patient finds the plaster more acceptable to the skin than anything which you can interpose; he is then enjoined to keep quiet, as the disposition to move round does not benefit the case.

COMPOUND FRACTURE OF TIBIA AND FIBULA.

Among compound fractures we notice one of the tibia and fibula, leg being placed in the hospital swing, which is well adapted for the purpose. It consists of an iron frame, the leg suspended and resting upon muslin strips, which can be changed and kept free from all discharges without disturbing the leg.

ESMARCH'S METHOD.

Esmarch's method of operating was performed by Dr. Speir in removal of the first row of carpal bones, for necrosis. The entire absence of blood certainly simplified the operation, and it remains to be seen if the result justifies it. In sprains, with subacute inflammation of the joint, nitrate of potash, in 20-grain doses, three times daily, is found serviceable, and in indurated swellings the following ointment has been used successfully:

Unguent potass. iodidii,
" belladonnæ, āā ..... ʒ ss.

or

℞. Liniment sapon. camph..... ʒ iv.
Potass. iodidi..... ʒ ii.
Tinct. belladonnæ..... ʒ ss.

Erysipelas is successfully treated by large doses of mur. tr. of iron and the lead and opium wash.

"Styptic cotton" has been used in this hospital for some time, and has been found useful as an antiseptic dressing in compound fractures, also in arresting hemorrhage. It is frequently applied to indolent ulcers and excoriated surfaces (after first scarifying them), to secure healing by scabbing.

Skin-grafting has met with very good results in this hospital.

Strictures of the urethra are treated, during the present service, by internal division with the urethrotome.

In closing wounds, the hare-lip suture is used in preference to silver wire or silk.

Several cases of abdominal aneurism have been successfully treated by the administration of gallic acid ʒ ss. and liq. ferri subsulphatis gtt. iv., three times a day alternated. During the present service Speir's artery-constrictor is used in closing arteries after amputations, etc.

The aspirator was recently used in removal of fluid from the knee-joint, with good result.

Progress of Medical Science.

CONTRIBUTION TO THE STUDY OF EMETICS.—A hypodermic injection of free emetine causes vomiting, and the emetine is detected in the stomach and in the vomited matters. The vomiting does not take place until after three times as long a period as when given by the mouth. Hleimann and Simonowitsch have obtained analogous results on introducing the emetine into the veins. The vomiting takes place by reflex action; the centripetal arch is most frequently formed by the pneumogastric. The first impression is formed by emetine on the gastric extremities of this nerve. The centripetal arch follows the course of the glossopharyngeal when there is nausea, but follows another when the vomiting originates in the brain, as from bad odors, etc.

The action of the pneumogastrics is demonstrated, first, by the vomiting which immediately and constantly follows irritation of the central extremity; second, by retardation and suppression of vomiting when the experiment is made upon a dog whose pneumogastrics have been cut. If in such cases the vomiting is not suppressed, it is because the deficiency of the pneumogastrics is supplied, and the centripetal arch of innervation is completed by the great sympathetic. "The centrifugal arch is supplied by the great sympathetic, and it probably has its centre of reflection in the solar plexus."—*Lo Sperimentale*, 10, 1873.

LIME-SUGAR GLYCERINE.—Latour had occasion to try this new lime liniment on a number of patients, wounded by an explosion at Mont Valérien, and with especially good results. Eutasis's saccharate of lime is almost equally soluble in water and glycerine, in the latter in the proportion of about 36 per cent.; but the aqueous solution is coagulated by heat, which does not take place with the glycerine solution. Instead of using the dry saccharate of lime, Latour makes a nearly saturated solution of the saccharate in the following manner:

Calc. oxid. hydrat.....	gram.	200
P. sacchar.....	"	400
Aquæ.....	"	2,000
Glycerini.....	"	400

The lime and sugar are well mixed in a mortar, and water slowly added till a clear homogeneous paste is obtained. The mixture is placed in a well-corked flask, and allowed to stand for twenty-four hours. It is then filtered, the glycerine added, and evaporated to one litre. The glycerine does not coagulate by boiling unless it has been diluted with four volumes of water. Placed on the skin, the mixture forms a sort of varnish,

and causes a pleasant sensation of coolness on the inflamed surfaces.

The new lime liniment is prepared by mixing one part of the above-mentioned dilute solution, before evaporation, with two parts of olive-oil. A mixture which is not so thick is obtained by using almond-oil in place of olive-oil. Where there is considerable suppuration, camphor-oil may be added to diminish the fetid smell.

Dr. Lagarde has found the liniment useful for burns, and Dr. Müller, for erysipelas of the face. Latour maintains that it may be advantageously used in other cases, where the skin is the seat of more or less severe inflammatory symptoms, as in erythema, frostbite, variola, and various eruptions.—*Report de Pharmacie and Hospitals, Tidende*, Jan. 14th, 1874.

MEDICATED GELATINE.—Disks of gelatine, impregnated with atropine, calabar bean, etc., have been used for a long time, and it has been found that the dose thus administered could be readily and accurately determined by the size of the disks. In Sweden, since 1870, many other remedies have been prepared in this way. The sheets of impregnated gelatine, marked in small squares, containing a determined amount of the medicine, are put up in envelopes, which are marked with the name and dose of the remedy. The medicines most commonly used may thus be carried in a small pocket-case and dispensed by the physician.

At a meeting of the Swedish Medical Society, on the 21st of October last, Dr. Edholm made a report on the use of Prof. Alméns' medicated gelatine by the Swedish polar expedition of 1872–73. This method of administering medicines was found very convenient and efficient. Many specimens were exposed to all varieties of temperature, as well as to extreme moisture and dryness, but at the termination of the expedition, which lasted fifteen months, they were found to have retained their original condition and therapeutic properties unimpaired. In using the disks, the prescribed number are placed on the tongue and swallowed with the aid of a little water. They are quite tasteless.

SERO-ALBUMINOUS EPISTAXIS.—In the recent discussion on Albuminous Expectoration at the Société Med. des Hôp., analogous cases of epistaxis were cited. The following is a new case in point: a man, aged fifty, well made, suffering from hemorrhoids, without any previous weakness or malady, is taken from time to time, suddenly and without appreciable cause, with an abundant nasal flux. The liquid is sero-albuminous, limpid, insipid, inodorous. The flux is preceded and accompanied by pruritus of the nasal mucous membrane; it takes place from the nostrils, and occurs several times in the day. Injections and inhalations of salt-water suffice to arrest the flux, which has several times been cured by the same method.—*Gazette Med.* and *Mouvement Med.*

NON-MECHANICAL TREATMENT OF PROLAPSUS UTERI.—Dr. Andreef having noticed that tincture of iodine applied to the uterus is capable of rendering the ligaments firm and tense, has tried this remedy in prolapsus uteri. The results appear to be quite satisfactory in the cases he has published. The simplicity and innocence of the treatment should lead to its adoption by others. The first case was that of a young woman who had had prolapsus for four years. The organ was replaced by means of the speculum, and a gramme and a half of the officinal alcoholic tincture, slightly diluted with alcohol, was applied to the roof of the vagina. The patient maintained a horizontal position in bed for several days, and made four injections of warm water each day. The operation was repeated every three days for four times, the tincture being more and more diluted each time. The patient was completely cured.

The author states that from two to six applications of the tincture are usually sufficient. If complicating diseases exist, they are to be first cured. The tincture is to be applied to the roof of the vagina only, and the patient should remain in bed during the first two applications; during the remainder of the treatment it is necessary to merely abstain from fatiguing occupations, walking, etc. The bowels should be kept open. —*Riv. di Med., di Chir. e di Ter., and Nuova Liguria Med.*, 30, 1873.

TREATMENT OF ANGINA PECTORIS.—Dr. Hueber, of Lioland, believes that the only permanent relief for angina pectoris is to be obtained through the galvanic battery. In most cases of this kind, where auscultation and percussion reveal no material change in the heart, the phenomena are so characteristic of nervous affections that the disease should be regarded as a nervous one. The cardiac plexus is the seat of the difficulty, and hyperæsthesia provokes the alarming train of symptoms.

In an obstinate case which came under his care, Dr. Hueber employed a number of remedies without success, and finally had recourse to the galvanic current.

He employed Stohrer's battery with thirty elements. The cord was found intact, but on applying the current over the sympathetic, only four elements were borne on the left side, and six on the right. After the first sitting, the attacks ceased, and never returned. The patient was soon able to bear six elements on the left side, and eight on the right; and finally, an equal number could be applied on both sides. Thirteen applications in all were made. It is proper to add that the valerianate of quinine was continued without interruption at the same time, though from previous experiences it was not believed to have effected the permanent cure.—*Deutsche Archiv f. Klin. Med., Allg. Wien. Med. Ztg.*, 2, 1874.

ARTICLES IN OUR EXCHANGES.

ANATOMY AND PHYSIOLOGY.

On the nerve-centres of circulation and uterus. WILLIAM SCHLESINGER. *N. Y. Med. Jour.*, February, 1874.

Anomalous biceps flexor cubitorum. DAVIS HALDERMAN. *The Clinic*, vi., 5.

PATHOLOGY AND PRACTICE OF MEDICINE.

Case of intra-recto-abdominal manual exploration. CHARLES A. LEALE. *New York Med. Jour.*, February, 1874.

Cerebro-spinal meningitis. TRENHOLM. *The Canada Med. Record*, ii., 6.

Cases of cerebro-spinal meningitis. RAWLINGS YOUNG. *The Am. Practitioner*, February, 1874.

Cases of albuminuria. GEORGE N. MONETTE. *Ibid.*

Malarial fever. B. F. HART. *The Rich. and Louis. Med. Jour.*, January, 1874.

Curiosities of cough. (Continued.) ELSBERG. *Phil. Med. Times*, iv., 119.

Delirium tremens. N. S. DAVIS. *The Med. Examiner*, xv., 3.

Renal disease. Probable tape-worm. TRIMBLE. *Ibid.*

Scarlet fever. G. W. HEWITT. *The Clinic*, vi., 5.

A case of cerebral exhaustion. DAVID MACK. *The Boston Med. and Surg. Jour.*, xc., 7.

Cerebro-spinal fever. NASH. *The Penins. Jour. of Med.*, February, 1874.

Paracentesis thoracis, with recovery. GEO. HALLEY. *The Kansas City Med. Jour.*, January, 1874.

Dipsomania and drunkenness. A. A. MORE. *The Clinic*, vi., 6.

Impacted gall-stone and death. JAS. M. CONFER. *Ibid.*, 7.

Pathology of the vaso-motor nervous system. J. S. JEWELL. *The Chicago Jour. of Nerv. and Ment. Dis.*, January, 1874.

SURGERY.

Bloodless operations. M. FIGUEIRA. *N. Y. Med. Jour.*, February, 1874.

Case of lumbar hernia. CAMPBELL. *Ibid.*

Aneurism of external plantar artery. J. H. JOHNSON. *Bost. Med. and Surg. Jour.*, xc., 5.

Strictures of the urethra. GEORGE W. GAY. *Ibid.*, 6.

Operation of lithotomy. A. HALFORD WARKER. *The Canada Lancet*, vi., 6.

Amputation of thigh for caries and necrosis. C. SHRIVER. *The Cincin. Lancet and Observer*, February, 1874.

Treatment of fractures of the lower extremities. J. F. WOODS. *The Buffalo Med. and Surg. Jour.*, January, 1874.

Incised wound of abdomen. THOMAS A. DURGAN. *The Med. and Surg. Reporter*, 884.

The use of nitrate of silver and chromic acid in the cavities of the mouth and ear. CHARLES A. TODD. *The St. Louis Med. and Surg. Jour.*, February, 1874.

Ligature of arteries as a preventive in inflammation. D. C. JONES. *The Kansas City Med. Jour.*, January, 1874.

Gun-shot wound of the abdomen. TADLOCK. *The Med. and Surg. Reporter*, 879.

OBSTETRICS, DISEASES OF WOMEN AND CHILDREN.

Case of ovariotomy. C. H. RICHMOND. *N. Y. Med. Jour.*, February, 1874.

Case of acardia. Plates. LUSK. *Ibid.*

Case of obstruction of the bowels from undeveloped large intestines in child recently born. B. HADRA. *Ibid.*

Neugebauer's specula. JAMES R. CHADWICK. *The Boston Med. and Surg. Jour.*, xl., 6.

Case of double placenta. BOGART. *The Canada Med. Record*, ii., 6.

Catarrhus gravidus. HENRY V. GRAY. *The Richmond and Louisville Med. Jour.*, January, 1874.

Malignant disease of the uterus and vagina. H. D. VOSBURGH. *The Buffalo Med. and Surg. Jour.*, January, 1874.

Diseases of the uterus. CLEAVER. *The Cincin. Med. News*, ii., 12.

Treatment and prevention of uterine disorders. (Continued.) GOODELL. *The Med. and Surg. Reporter*, 879, 880-4.

Case of hour-glass contraction of the uterus before delivery. J. TRUEMAN DAVIS. *Ibid.*

Case of ovarian tumor in a girl of eleven years. BERCHELMANN. *The St. Louis Med. and Surg. Jour.*, February, 1874.

Chronic hydrocephalus. CLAYTON KEITH. *Ibid.*

Complete occlusion of the os uteri in labor. S. S. TODD. *The Kansas City Med. Jour.*, January, 1874.

Two cases of ovariotomy, both resulting fatally. BROCK. *The Med. Herald*, January, 1874.

Puerperal convulsions; patient delivered of twins. T. J. RODDICK. *Can. Med. and Surg. Jour.*, February, 1874.

Case of puerperal convulsion. WASSAM. *The Clinic*, vi., 7.

SYPHILIS AND DERMATOLOGY.

The rite of circumcision: why sometimes followed by disease, etc. L. H. COHEN. *N. Y. Med. Jour.*, February, 1874.

Chelis and lepra. J. L. MILTON. *Ibid.*

Differential diagnosis between psoriasis and syphiloderma squamosum. DUHRING. *Phila. Medical Times*, iv., 119.

Communicability of syphilis after it has been apparently cured. H. E. WOODBURY. *Ibid.*

Periodical urticaria. SHENCK. *The Med. Examiner*, xv., 3.

Vaccination. GEORGE A. BAYNES. *Can. Med. and Surg. Jour.*, February, 1874.

Syphilis; hemiplegia; aphasia; recovery. H. WEBSTER JONES. *The Chicago Jour. of Nerv. and Ment. Dis.*, January, 1874.

OPHTHALMOLOGY AND OTOLOGY.

Injuries of the eye by penetrating foreign bodies. S. C. AYRES. *The Cincin. Lancet and Observer*, Feb., 1874.

Enlarged tonsils and deafness. W. W. SEELY. *The Clinic*, vi., 6.

MATERIA MEDICA, THERAPEUTICS AND TOXICOLOGY.

Uterine fibroids treated by electrolysis. GILMAN KIMBALL. *The Boston Med. and Surg. Jour.*, xc., 5.

The use of warm water by submersion, in surgery. F. H. HAMILTON. *The Rich. and Louis. Med. Jour.*, January, 1874.

Puerperal eclampsia treated by chloral hydrat. JOHN FIELD. *Ibid.*

Groove *versus* canula needle for sutures. PAUL EVE. *Ibid.*

Dropsy of the pleura cured by laxatives and digitalis. C. P. ALLEN. *Phila. Med. Times*, iv., 119.

Electricity in the treatment of chilblains. ALONZO L. LEACH. *Ibid.*

Mercury: its preparations, physiological and toxic properties. A. B. LYONS. *The Detroit Rev. of Med. and Phar.*, February, 1874.

Mercury: its therapeutics. JUDSON BRADLEY. *Ibid.*

Electricity in post-partum hemorrhage. CHAS. W. EARLE. *The Med. Examiner*, xv., 3.

Hypodermic injection of coffee in opium-poisoning. GARRISON. *The Med. and Surg. Reporter*, 884.

Paralysis of the portis dura treated by electricity. ISRAEL CLEAVER. *Ibid.*

Drops. HORATIO N. FRASER. *The Pharmacist*, Feb., 1874.

Laws and regulations to elevate the drug business. FREDIGKE. *Ibid.*

Formulas for elixirs adopted by the American Pharmaceutical Association. *Ibid.*

Unofficial formulas. HANCOCK. *Ibid.*

Formulæ for pepsin preparations. BIROTH. *Ibid.*

The popular remedies of Toorkistan. DRAGENDORFF. *Ibid.*

The treatment of whooping-cough. VAIL. *The Med. and Surg. Reporter*, 879.

Prophylactic treatment of intermittent fever. SHEARER. *Ibid.*

The treatment of small-pox. VON MANSFELDE. *Ibid.*, 880.

HYGIENE.

Cholera hygiene. ELY MCCLELLAN. *The Am. Practitioner*, February, 1874.

Facts in the history of Asiatic cholera. CLENDENIN. *The Cincin. Lancet and Observer*, February, 1874.

Report on vital statistics. D. T. SMITH. *The Cincin. Med. News*, ii., 12.

Colorado as a sanitarium. CHEEVER. *The Penin. Jour. of Med.*, February, 1874.

MISCELLANEOUS.

On the logical proof of the contagiousness and non-contagiousness of diseases. AUSTIN FLINT. *N. Y. Med. Jour.*, February, 1874.

Charlatanism. GEO. GRENIER. *The Canada Lancet*, vi., 6.

Pathology of vertigo in the horse. A. J. MURRAY. *The Detroit Rev. of Med. and Phar.*, February, 1874.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, March 16, 1874.

THE ARMY MEDICAL STAFF BILL.

THE hearty endorsement by the profession of the "Bill to Promote the Efficiency of the Medical Department of the United States Army," is nothing more than could have been expected. It is eminently proper that this should be the case, as no body of men are capable of expressing an opinion upon a subject which is of such a purely professional character, which involves so many questions of professional qualifications, professional emoluments, and professional honors.

Ever since the Memorial from the American Medical Association was presented to Congress, we have advocated the measures proposed, and shall continue so to do so long as the bill is *sub judice*. The whole matter merits discussion, and the profession are more than willing that it should be discussed, confident that nothing but good can come of such a course in affording opportunity for the presentation of facts which are able to speak for themselves in the interest of truth and in the cause of justice.

Thus far an encouraging progress has been made in the required direction. The committee having the bill in charge have shown a commendable willingness to be guided by the suggestions, to be convinced by the arguments, and to be impressed by the facts which have been offered in favor of the passage of said bill.

The questions of the necessity of the change proposed, of the utility of the measures urged, have been and are still the main ones upon which its final success must be determined. These are obstacles which, in the main, apply to the passage of every bill; but it is especially the case in the present instance, as it has been claimed that the medical department is as good as it can be made; that good men have always been found in the medical profession to keep the Army Medical Staff to its present standard; that the compensation has heretofore been satisfactory; and that the country's requirements for economy are incompatible with the increased expenditure involved.

These objections can be met satisfactorily, we believe, by the discussion of the general subject under the following heads:

I. What are the duties of our army surgeons?

II. What sort of men are required to perform these duties?

III. What are the services of such men really worth?

I. The army surgeon is responsible to the government for the health, and often for the lives, of our soldiers, officers, and their families. In discharging such weighty responsibilities he must rely on his individual skill and knowledge in any and every emergency, rarely having the opportunity of consulting with others of his profession, as in civil practice. He is expected to be a good obstetrician, a skilful physician, a successful surgeon, ready to undertake any operation without professional assistance, to face an epidemic, to organize a system of quarantine, to conduct a difficult labor, or to build and conduct a hospital. He must needs be a practical hygienist, liable at any time for an opinion as to the healthfulness of a particular locality at a particular time; as to means to be adopted to prevent the spread of an epidemic; to examine and decide upon a proper water supply; to provide suitable means of disinfection, and to guard against malaria.

II. In view of these requirements, and in view of the faithful and conscientious discharge of the duties of his office, the answer to the second question can be readily anticipated. In a word, the army surgeon must be a thoroughly educated, scientific medical man, and such qualifications must be guaranteed by a strict and thorough examination before he is allowed to enter the corps. The standard of requirements cannot possibly be lowered, if the best educated medical men are needed.

III. The answer to the third question, "How much are the services of such men really worth?" is one which has a very important bearing. It is no doubt possible that the government might get physicians for one hundred dollars a month, and it is certain that it could not get some of our physicians for six times that amount. Practising in one locality, with a home, friends, and the conveniences of civilization, is a very different thing from the life of a medical officer who must break up his little establishment about once in two years on the average, selling what he can, and giving or throwing away the rest, to obey an order to report to some distant post, perhaps to meet an epidemic, to be separated from his family, or to take what is technically termed "the risks of war"—the risks with none of the honors. The question resolves itself into one of demand and supply, and we are willing to view it from such a standpoint. The value of services can only be measured by the amount of compensation they can command in open market. A physician in civil practice, after his first five years, can generally

command a living income for himself and family, which income steadily increases with his reputation, until, at the end of twenty years, it will average five or six thousand per annum. We make this average low purposely, to make it apply to physicians all over the country, and for the reason that we wish to be understood as speaking entirely within bounds when we assert that such is an ordinary success for a skilled practitioner anywhere. In this estimate we leave out of consideration the incomes of some of our leading metropolitan practitioners of twenty years' practice, whose earnings vary from ten to twenty thousand per annum.

Let us contrast these amounts with the pay of the army surgeon, who must be acknowledged to represent a high type of professional intelligence and ability:

Pay on entering service, and for three years after, per annum	$1,600
Pay after three years, and up to an average of fifteen years' service	2,000
Pay after fifteen years service (rank of major)	2,500

In addition to the above, ten per cent. is allowed for each five years of service. When disabled by age or disease, these gentlemen can be retired on three-quarters of the above rates.

The opinion of the Surgeon-General, endorsed by every medical man in the land, is that the inducements now offered by the government are not sufficient to retain such men in service as ought to be employed.

This opinion is based upon the following significant statement:

Number of medical officers in the United States Army, January 1, 1865	163
Number of medical officers in the United States Army, added since January 1, 1865	79
	242
Medical officers who have resigned since January 1, 1865	48

It will be seen that almost twenty per cent. of the corps have, during the time named, resigned. The reason is quite obvious. They could surely do much better in civil practice. We could name many striking examples of this sort which have come under our own observation in this city, every one of which, by the remarkable success in private practice, proves the army surgeon to be a thoroughly competent practitioner.

The present request of the army medical officer is certainly a very modest one under the circumstances, and must needs commend itself to the most rigid economist in the House. The army surgeons are seemingly content with the present rate of pay for twenty years, but after that they ask that the rate be three thousand a year, and after thirty years' service (!) that it may be thirty-five hundred per annum, the reason for the latter modest request being, that when they are retired, which happens very soon after, they may then receive twenty-six hundred and twenty-five per year; and this is all that the faithful army surgeon can hope to look forward to in his old age. It is certainly a reflection upon our government that such a request should be necessary, much less that there should be any doubt of its being granted.

If none of the changes contemplated in the bill are made, the government must expect to hear of more resignations, must calculate upon having the vacancies thus created filled either by physicians employed by the month, or by freshly graduated men. To none others would it be an advantage to enter the service. The income of a young physician, just starting in practice, is always exceedingly small, and the salary of an assistant surgeon is a temptation to any worthy and young medical man who wishes to bridge over the pecuniary trials of the first five years. After that time he is aware that he is at a standstill; in fact, that every year he remains in the corps is a pecuniary detriment to him; consequently, just at the time when his services begin to be really valuable to the government, he is forced to offer his resignation. If it be economy on the part of the government to encourage such a practice, we are at a loss to see wherein it is the gainer. The policy should be to offer such inducements to the best educated medical men, not only to enter the army, but to remain in it; and this end can only be attained by a regular increase in pay and a corresponding increase of rank and honors.

The profession at large are interested in this matter in two ways. As a body of citizens specially qualified to judge of the medical wants of the army and of the country, it urges the adoption of measures to secure and retain the best medical talent in the land; as a body of professional men, it has a just pride in seeing itself well represented in the service of its country. The latter consideration is especially important in view of the valuable services which these men may, under the patronage of the government, render to medical science in general. There are medical problems which can be worked out to no better advantage than by that very concentration of intellectual force and well-regulated system which can only obtain in a well-organized and well-disciplined corps. Let us take a single instance in passing. The army surgeons, scattered all over the country, are ordered to report their observations, and work upon a common plan, and report to a central head. In no other organization of medical men could such a concentration of work be accomplished, and in no other way could such valuable reports be made available to science and humanity.

In order to show the relation the medical officers of our army bear to the same officers of the English army as to rank (and consequently pay), and also to the other staff corps of the army and navy, we have taken pains to present the following table, which speaks for itself:

Medical Department.	Major-General.	Brig.-General.	Colonel.	Lt.-Colonel.	Major.	Captain.	Lieut.	Total.	Ratio to Whole Number of Active and Retired: Cols.	Ratio to Whole Number of Active and Retired: Lt.-Cols.	Ratio of Whole Number of Active Officers: Cols.	Ratio of Whole Number of Active Officers: Lt.-Cols.
English Army: Active	5	6	16	121	408	451	702	1709	.....	.....	1 to 107	1 to 14
do. do. Retired	..	14	31	117	61	..	..	223	.....	.....	.....	.....
Total	5	20	47	238	469	451	702	1932	1 to 41	1 to 8	.....	.....
U. S. Navy: Active	..	1	14	15	50	50	50	180	.....	.....	1 to 13	1 to 13
do. do. Retired	..	16	4	..	6	3	..	29	.....	.....	.....	.....
Total	..	17	18	15	56	53	50	209	1 to 11	1 to 14	.....	.....
U. S. A. Medical Department: Active (Act. July, 1866.)	..	1	1	5	60	50	100	217	.....	.....	1 to 217	1 to 44
U. S. A. Medical Department: Retired	..	..	1	2	3	5	..	11	.....	.....	.....	.....
Total	..	1	2	7	63	55	100	228	1 to 114	1 to 32	.....	.....
U. S. Quarter-masters' Dept.: Active	..	1	5	10	14	30	..	60	.....	.....	1 to 12	1 to 7
do. do. Retired	..	..	6	..	..	..	..	6	.....	.....	.....	.....
Total	..	1	11	10	14	30	..	66	1 to 5½	1 to 6	.....	.....
U. S. Commissary Dept.: Active	..	1	2	2	8	13	..	26	.....	.....	1 to 13	1 to 13
do. do. Retired	..	..	..	..	..	..	..	..	.....	.....	.....	.....
Total	..	1	2	2	8	13	..	26	1 to 13	1 to 13	.....	.....
U. S. Engineers' Dept.: Active	..	1	6	12	24	30	26	99	.....	.....	1 to 16	1 to 8
do. do. Retired	..	..	1	1	1	..	..	3	.....	.....	.....	.....
Total	..	1	7	13	25	30	26	102	1 to 14	1 to 8	.....	.....

Can we do more, in conclusion, than speak, on the behalf of the medical profession of the United States, in terms of unqualified approval of the bill now before the committee?

ALUMNI ASSOCIATIONS.

The various medical Alumni Associations of our city appear to be actuated alike with the desire to promote friendly intercourse among their members and to advance the cause of medical education in their respective schools. Subscriptions are already started for the establishment of a fund for the endowment of extra professorial chairs, and the success which has so far rewarded the efforts in this direction are substantial evidences of hope for the future. An important recognition of the influence of the Alumni Associations is given in the recent action of one of the faculties in allowing the President of its Alumni Association to be a member of the board of trustees. This is a matter of right which we have long ago insisted upon. We hope soon to hear that other college faculties have followed this commendable example.

HOSPITAL APPOINTMENTS.

In a recent after-dinner speech at one of the college reunions, Mr. Stern, one of the Commissioners of Charities and Correction, acknowledged that the present method of appointing physicians to the hospitals was faulty in so far as it left the choice to laymen, and he was inclined to the opinion that the profession alone should have a voice in the matter. This is what we have many years contended for. We should like to hear of a practical plan from Commissioner Stern upon which such appointments could be made.

OUR PUBLIC SCHOOLS.

The daily press is giving considerable attention to the discussion of the question of the physical welfare of school children. One paper calls attention to the bad effects of insufficient light, another to bad ventilation, etc., all agreeing that a reform is necessary. The initiation of such a reform would be to appoint a medical man upon the Board of Education, and thus pave the way for the establishment of proper sanitary inspection and hygienic regulations. It must come to this at last, if any reasonable reform is contemplated.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF KINGS, N. Y.

DISCUSSION OF THE THERAPEUTIC VALUE OF VERATRUM VIRIDE IN PUERPERAL CONVULSIONS AND OTHER SPASMODIC DISEASES.

This subject was before the Society at three meetings within the past twelve months—two in May, one in January. The report is necessarily greatly condensed, and is arranged rather according to the subject-matters discussed, than to the exact order of the remarks in point of time; precedence being given to the treatment of puerperal convulsions.

CASES OF PUERPERAL CONVULSIONS TREATED BY VERATRUM VIRIDE.

Case I. By Dr. Corey.—Mrs. H., æt. 19, primipara, robust and of full habit, delivered at term at 10 A.M., the labor natural, and presented no untoward symptoms. At 11 P.M., without any premonitory symptoms, a violent convulsion occurred, which was soon followed by others, each of which was represented by friends as more severe than the preceding one.

In the absence of the attending physician, I was

summoned at 1 A.M. Found the patient insensible and struggling violently with her friends; face flushed; head hot; pulse 130 per minute, full and strong. Desiring to test the action of veratrum viride in such cases, I determined to rely wholly upon this agent, and began by giving 15 drops of the officinal tincture every fifteen minutes. No perceptible effect being produced upon the pulse at the end of an hour, I gave 20 drops as before, once in fifteen minutes, which reduced the pulse to 98 during the second hour.

At 3 o'clock a sixth convulsion occurred. As soon as the patient could be made to swallow, I gave ½ teaspoonful of the tincture, which caused slight nausea, free perspiration, and reduced the pulse to 78 per minute, when I repeated 20 drops every fifteen minutes, until the pulse was reduced to 65; after that the remedy was given at longer intervals, but sufficiently often to keep up a free perspiration.

At 5 o'clock the pulse suddenly increased in frequency, and was followed by another convulsion, the seventh, which was less severe than the previous ones, but strongly marked; 20 drops of the tincture was given, which promptly reduced the pulse to 58, and caused complete relaxation, with free perspiration and vomiting. Occasional doses of ten drops now served to keep the pulse below 60 until 7 o'clock, when, no convulsion occurring, I left the patient, directing 10 drops to be given once in fifteen minutes, unless vomiting should occur, in which case it was to be discontinued.

Returning at 9 A.M. I found that a single dose only had been given, because, as the mother said, "she seemed so sick to her stomach," and that a slight convulsion (the eighth) had just occurred. A single dose of 20 drops of the tincture at once brought the pulse down to 55, and again induced free perspiration.

During the night the kidneys had acted freely, and the bowels moved twice. At this time, 9 A.M., the patient seemed partially conscious, and as she complained of headache, it was determined to supplement the veratrum by a brisk cathartic, for which purpose ½ grain elaterium was given. Free catharsis followed, with marked relief of headache. The patient had no more convulsions, and made a speedy recovery, having taken in all 5 drachms of the officinal tincture.

CASE II.—Mrs. G., primipara, æt. 21, in early life an epileptic, plethoric and anasarcous; urine highly albuminous; labor normal and terminated in five hours. At 9 A.M. patient seemed inclined to sleep, but drowsiness was attributed to chloroform used to facilitate labor. At 11 A.M. a convulsion occurred, and was represented by the nurse as "very severe;" at 12.30 there was a second, not so violent. At 12.40, when I first saw her, she was comatose; pulse 98. At once gave her 10 drops of Squibb's fluid extract of veratrum viride. At 1, patient profoundly comatose, pulse 120, face suffused, head hot; repeated dose. At 1.30, pulse 100, gave 10 drops more. At 2, pulse 80, no nausea, but skin somewhat relaxed; gave 10 drops more. At 2.30, pulse 66, slight nausea, with free perspiration. At 3, pulse 58, sleeping heavily, but can easily be roused so as to recognize friends and swallow nourishment; relaxation complete; free perspiration; this continued for the next two hours. Forty drops of the extract were taken in less than an hour and a half. At 5, urine was drawn and found highly albuminous. At 7.30, perspiring freely, slight vomiting. The night following passed comfortably, patient gradually regained consciousness, and speedily recovered without return of convulsions.

CASE III. BY DR. RUSHMORE.—Mrs. W., æt. 22, primipara, was delivered at about 1 P.M., March 25, 1873, at full term, of a healthy male child. I first saw her during the second stage of labor, and learned that she had suffered much from dyspeptic symptoms and œdema of ankles during the last two months of pregnancy. At 8.15 P.M., after several hours' severe and throbbing headache, she had a convulsion, which the nurse said lasted ten minutes. At the suggestion of Dr. Hutchison, who saw the case with me, twenty drops of Squibb's fluid extract of veratrum viride were administered by the mouth, and repeated every twenty minutes until 10.5 P.M., when she had a second convulsion. After the first convulsion, the pulse came down gradually from 100 to 76 beats per minute, and was reduced materially also in force; there was almost complete loss of sight, which continued until the following evening. Chloroform was administered during the second and third convulsions, but did not seem to shorten their duration. After the second convulsion patient vomited freely, and the pulse ran down to 60, when I ventured to decrease the dose to fifteen drops. The pulse increased in frequency, and at 1.45 A.M., March 26, she had a third convulsion less severe than the preceding. Patient still complains of her head, and is perspiring freely. At 4 A.M. she had the fourth and last convulsion, of short duration, followed by deep sleep with stertorous breathing. At 5.50 found the urine (the first that could be obtained) highly albuminous. The bowels were freely moved by the use of croton-oil, and the pulse, under fifteen-drop doses of veratrum given every half hour, fell to 55 at 2 P.M., and from the next dose at 4.30, to 48, the temperature being 98°. A single ten-drop dose was given at 10 o'clock, and then omitted, the patient having taken, in all, 483 drops in about twenty-six hours. The sight returned slowly after 10 o'clock, and on the following morning patient was free from headache, having slept well during the night, though feeling still weak. Her pulse was beating at the rate of 60 per minute. Of course the patient had been nourished by the use of beef-tea, milk, &c. The urine, which contained no casts, in the course of two weeks was entirely free from albumen, and with the exception of a mammary abscess during the following week, the patient made a good recovery.

CASE IV. BY DR. FEARN.—Sept. 5, 1871, I was called by Dr. Teller to take charge of a case of puerperal convulsions occurring in an Italian patient about twenty-five years of age, and a primipara. She had been suffering from headache, great nervous excitement, and general anasarca. The doctor ordered three comp. cath. pills, and at 6½ P.M. bled her copiously; but the convulsions did not cease. He then ordered half-teaspoonful doses of tincture veratrum every two hours. When I arrived, at about 9 P.M., she had not had a convulsion for nearly an hour. Shortly after my arrival she had another convulsion. After it had passed off, the pulse was 108 and firm. I then ordered the same dose repeated every half-hour until 2 A.M. of the 6th, at which time the pulse came down to 80, and the same dose ordered to be continued every hour. At 3 A.M. she vomited freely, and passed a small quantity of urine. I then had the dose reduced to one-fourth of a teaspoonful, to be repeated every hour as before. At 4 A.M. I was aroused to find her in a very severe convulsion, from which she never rallied, and died at 11½ A.M. All our efforts to excite premature labor were unsuccessful.

Remarks.—In the case related above, the patient being unable to speak or understand the English language, we were not able to do much with her except by force. But the case clearly shows veratrum to be more efficient than blood-letting, for there were six

hours between the convulsions after the veratrum was administered freely.

CASE V.—BY DR. W. H. THAYER.—Mrs. A., aged 25, married two years, primipara, was first seen May 3, 1873, in consultation with Dr. Geo. I. Bennet. Gestation had progressed to full term, with little disturbance besides œdema of lower limbs. Urine not examined. On the 2d of May had symptoms of "indigestion," as vomiting and cramp in stomach. At 4 A.M. the next morning convulsions set in, and when seen, at 9 A.M., there had been five severe and protracted seizures, marked by frothing at mouth, lividity of face, unconsciousness, and stertorous coma. Pupils dilated; pulse 120, tense, but not full; in the first stage of labor. As she had been treated by tartar emetic, and venesection (about four ounces taken), and large sinapisms, without benefit, treatment by veratrum was substituted, and at 9.40 A.M., one drachm of Norwood's tincture was given. After this she had only two convulsions, at 10 and 11 P.M. The pulse was reduced to 60, and soft; vomiting continued nearly one hour. Labor terminated at 2.30 P.M.; child dead. Recovery.

Note.—This case is valuable by reason of the sharp contrast afforded between the vigorous antiphlogistic measures so long in vogue, and the treatment by veratrum. The former appeared to have no remedial power, while the latter was followed by entire relief, although labor was still in progress, and delivery not accomplished until three hours later.

CASE VI.—Veratrum alone employed. Mrs. S., æt. 32, married six years, primipara; of excitable temperament; a vegetarian; generally constipated and has dysmenorrhœa. Has had œdema of feet for two months; urine free. At 8 A.M., June 19, 1873, labor began, with considerable hemorrhage, ovum separated by clots. Premature labor induced; terminated at 6.15 P.M. Passed a quiet night, but at 11 A.M. (June 20) was taken with a violent convulsion, the first and only one. Pulse almost imperceptible, and respiration was much obstructed.

At 11.30, when not fully restored to consciousness, administered extracti veratri viridis gtt. xx.; pulse 104, full and strong. 11.45, extract. ver. vir. gtt. xxv. 12 M., pulse same, ext. v. v. gtt. xxx. 12.10, pulse 88; asleep. 12.15, pulse 100; patient uneasy; slight twitching of one side of face. Extract. ver. vir. gtt. xxx. 12.30, pulse 81: asleep. 12.50, pulse 72. 1 P.M. extracti ver. vir. gtt. xxx; more than two drachms in less than two hours. At 1.30 began to vomit, and continued at intervals, with profuse sweating, till 3 P.M. Found her languid, with pulse 42, without pain. Gave a small opiate, after which there was no more vomiting. 3.45, pulse has been at times as high as 48; now 42, of fair strength and fulness; respiration 10; three inspirations followed by a long rest. She lies quietly, with eyes shut, disinclined to speak; pale; feet and legs still œdematous; brandy ʒij. Patient went on favorably; urine passed freely, and œdema subsided in the course of a week.

There are three points worthy of notice in this treatment of puerperal convulsions: 1st, the relief is permanent, in which respect the method differs from all others; 2d, the relief comes when the pulse is reduced much below the normal standard, with free perspiration, vomiting, and general relaxation; 3d, this depressed condition is not dangerous nor alarming, but passes off in a few hours.

CASE VII. BY DR. A. L. LOWELL.—Mrs. S. G., aged 24, of good antecedent history, primipara, fell in labor at full term at midnight on the 23d April, 1873. During gestation there had been œdema of face, hands, and lower limbs; occasional scanty urination. Symptoms supposed to have been referable to albuminuria of gestation; face and neck of a waxy pallor, urine albuminous, about two-fifths its volume, at first visit, at 9 A.M., April 24th; casts in large number, chiefly fatty and granular. Labor: first stage ended at 4.15 P.M.; second stage at 6.35; and the third at 7 P.M.; delivered of a living male, weighing five pounds, which survived three months. At 7.35 had a well-marked eclamptic seizure; pulse, 100, full and hard; followed by stertorous coma. Decided to employ veratrum solely; gave 20 drops of the fluid extract (Squibb's). Repeated the dose at 8; pulse less tense. At 8.30, gave 20 drops more; pulse 80; skin, hitherto dry and hot, slightly moist. At 9, 20 drops more; pulse 72, with diminished tension; slight nausea; patient can be partially roused. At 10, 20 drops more; pulse 60, profuse perspiration. At 10.20 the last dose was given, twelve drops, producing decided nausea and bringing the pulse down to 54 beats per minute. Patient presently fell asleep, and passed a quiet night. No more convulsions. Recovery prompt, although urine was albuminous for over two months, and casts were found six months later.

CASE VIII. BY DR. E. S. BUNKER.—The fluid extract of veratrum viride given hypodermically in large doses. Sarah D., aged 19, unmarried, a domestic, was seen August 22d, 1873, in consultation with Dr. D. Ambrose. Pregnant condition had been concealed from the family for whom she worked by tight-lacing; had had severe headache, face and ankles puffy, great drowsiness at times.

At 8 A.M., while at work, fell suddenly in a convulsion, which recurred during the day, at the rate of three or four each hour. No urination, vomited frequently. Saw the patient at 3 P.M.; found labor-pains rapid and powerful, each accompanied by a furious convulsion. In the interval she was unconscious, almost comatose; pupils dilated and insensitive.

General anasarca present; bladder empty. Delivery was soon accomplished, by forceps, under chloroform. Child large and living.

Convulsions continued, followed by profound coma; pulse rapid and feeble, temperature 103°. A little urine was drawn, highly albuminous. At 10 P.M., ten drops of the fluid extract of veratrum viride were given by the mouth; pulse 100. More convulsions. At 11, ten drops more. At 11.45, a "frightful" convulsion took place, and death seemed imminent. Deglutition being impossible, the subcutaneous method was resorted to; keeping the needle in place, two minims were injected at intervals of about one minute. The pulse was closely watched, and finding the medicine well borne, the dose was increased to five minims, then to ten, and ultimately to fifteen minims. The pulse gradually fell, and skin became moist. At 2.10 A.M. (Aug. 23), there have been two more convulsions; pulse 100, temperature 103.5°. Twenty minims injected, a total of 320 minims. At 6.15 there have been five more convulsions; a thirty-minim injection given, the second of that quantity, total minims 425; pulse 120. The latter has been as low as 96 in the intervals. Bowels moved by turpentine enema. The first thirty-minim injection, at 6 o'clock, was followed suddenly by the discharge of a large quantity of urine, which saturated the bedding and ran over the floor. At 9.25 there has been no recurrence of convulsions; pulse 96. At 1 P.M., pulse 112; temperature 101°; skin moist, urine abundant. Acceleration of pulse is met by occasional ten-minim injections. At 7 P.M., the last was given, the total amount of the fluid extract of veratrum viride administered in 19 hours being 500 min-

ims. Free catharsis, induced by compound jalap powder at midnight; lochia, good; diet, meat-juice and milk. Aug. 24 (third day). Patient lies in a quiet, bewildered state; pulse about 108; temperature 101°. Aug. 25 (fourth day). Patient wakeful and partially restored to consciousness; pulse, 100. Sept. 1. Has nursed infant during five days; this afternoon went home with the baby in her arms.

Summary.—The period of six hours, ending 6.15 A.M. (Aug. 23), after which no convulsions recurred), may be divided into four smaller periods of one hour and a half each. In the first period, 285 minims were exhibited; in the second, 35; in the third, 15; and in the fourth, 90 minims. The results of the large dosings of the first period appear in the fact that there was only one convulsion in that time; and their effects continued through the second and third, one convulsion in each. And then the quantity, 50 minims, proving inadequate, a relapse occurred in the fourth period, with four convulsions. Large doses were promptly injected, and here the trouble and peril ended. No serious irritation arose from the tattooing of the arm by the hypodermic needle. The patient is alive and well.

Dr. S. Sherwell stated that Nov. 25, 1872, he used the fluid extract of veratrum hypodermically, three minim doses in the treatment of puerperal convulsions; also in apoplexy and sunstroke.

REMARKS ON THE VERATRUM TREATMENT OF PUERPERAL ECLAMPSIA.

Dr. E. R. Squibb. The cases of puerperal convulsions treated by veratrum that have been reported here proved to his mind that, first, there is no fixed dose—the test must be the effect produced, and not the number of minims given. The tendency in therapeutics, at present, seems to be to get rid of the trammel of dose, and neither uphold nor condemn a remedy because a given quantity does not produce an invariable effect. Idiosyncrasies are to be intelligently studied in the administration of veratrum, just as they are in other therapeutical measures. Again, the drug is shown by these cases to be eliminated with great rapidity. In one of Dr. Fearn's cases the omission of a dose was attended with an immediate rise of the pulse. The same is true of the narcotics. Thirdly, there is an intensity of habit in convulsions; they tend to recur until the habit is broken by a profound sedation of the heart's action. The dose can then be reduced. There is no great danger from the drug so long as the convulsive tendency remains. He recalled to mind the instructions of Dr. Meiggs as to the treatment of eclampsia. Dr. M. was accustomed to say that when a puerperal woman complained of severe frontal headache, and cried out, "O doctor, I can't see!" his impulse was to bleed. Sometimes he resisted this impulse; and when he did, he was sure to be sorry for it afterwards; for it was exactly in those cases that convulsions occurred. The bleeding prevented their occurrence; but, having begun, the bleeding would not subdue them. Let veratrum in like manner be used as a means of prevention.

The physician must discriminate between his cases. In a late issue of a Philadelphia journal a number of cases are reported where veratrum did harm; the drug is therein thoroughly condemned. He inclined to the belief that the drug does good only where the sthenic condition or type exists, as is commonly the case in young primiparæ. In the asthenic, when the pulse is rapid, but weak, it will prove injurious. The fact that primiparæ form so large a proportion of the subjects of eclampsia, may explain the freedom with which veratrum has been safely and happily given in so many cases. Something yet remains to be learned of the disease, before we can harmonize the reports of those who condemn the drug as thoroughly as others have lauded it. The question has been asked, What dose should be given, and what rules govern us as to its exhibition? There is no dose that will suit all cases. Effects should be watched for with the finger on the pulse. Anywhere from fifteen drops upwards of the tincture may be given until the irritability of the nervous system, on which the convulsions depend, is subdued. Anything short of this will be of only temporary utility, for the medicine is very rapidly eliminated from the system, and the effects of the medicine soon disappear; so that if large doses are not given, the dose must be repeated very often to maintain its control over the circulation. Therefore the pulse must be watched constantly. For rules of exhibition, see my paper in *Obstet. Journal* (American) for May, 1871.

The quantity required depends on the character of the case. In peritonitis, and also in flatulent colic, morphine is a very valuable medicine. But while none would think of giving six or more grains of morphine in a day in any ordinary case of the latter, few would hesitate to give that quantity, or more, in a severe case of peritonitis. The intensity of the morbid action is such as to resist the ordinary powers of the medicine in small doses.

Dr. C. H. Giberson. He, with others, had been somewhat startled by the original propositions made by Dr. Fearn in his paper read before this Society in 1869. Since that time, however, he had made an examination of the literature of veratrum viride, and he now believed that the extreme dread of the remedy, which had led to its disuse, was not warranted by the recorded facts. We have been taught to overrate its danger. There are other remedies in daily use which have a far more fatal record. Since Dr. Fearn's paper was presented, Dr. G. has had but one case of puerperal convulsions, and now regrets that he had not treated the case with veratrum. From his present knowledge of the subject, he believes that the case was exactly of the kind which may be saved by its use. Labor was ushered in by a convulsion, tetanic, and almost continuous, delivery was induced under chloroform; inhalation of the latter was continued during the greater part of ten hours. Patient died very soon after delivery. At the present time he is interested in a case of threatened uræmia in a primipara, having frontal headache, general anasarca, and urine albuminous, but not of very low specific gravity. Will the veratrum treatment apply to such cases for the prevention of convulsions before the labor-term has arrived? He hoped that an extended circulation might be given to the experience of our physicians in the treatment of puerperal convulsions by large doses of veratrum. The "Brooklyn treatment" has been the source of some amusement to several of the profession; possibly it may become the occasion of a gratification of another sort—possibly the life of some patient may be saved by it.

Dr. J. H. H. Burge. In the early years of his practice he had had six cases of puerperal eclampsia, and all had recovered without veratrum. He feared that heroic doses of it might have done harm to some of those cases.

Dr. A. Otterson. No one will doubt that we have a powerful agent in veratrum viride, but it is not so clear that it is a safe one. He believes it is sometimes potent beyond anticipation, and gets beyond the control of the physician. About twelve years ago it was prominently brought before the profession by Norwood, and

some other Southern practitioners, and was used by himself in a number of cases of acute and inflammatory disease, and in 1861 he wrote an article, commending the trial of Norwood's tincture, for *The Medical Monthly Review*, which was reprinted by Braithwaite, January, 1862. It never became very popular in this section, and he had happened to see so many cases of extreme prostration that he had for some time used it with great circumspection. He related one case of a robust ship-carpenter, sick of pneumonia, treated by a Thompsonian by large doses of veratrum viride, who was so thoroughly prostrated by the drug that he was supposed to be in a dying condition for several hours. When the speaker was called to see the patient he was insensible, voiceless, and almost pulseless. Stimulants, carbonate of ammonia, and the galvanic current were used for his relief, but without apparent results. Subsequently, however, the sedation passed off and the man recovered.

It may well be doubted if the mere sedation of the heart's action produced by veratrum viride will cure all cases of puerperal convulsions. He knew of a case of that kind, in which the pulse was less than 50 per minute, and yet the convulsions recurred. Six drachms of Norwood's tincture were given to this patient in 18 hours, the physician visiting the patient nine times in that period of time. Patient recovered.

Dr. S. G. Armor has had no experience with veratrum in convulsions, but had used it freely twenty or more years ago, when living in the West, where its merits have been pretty thoroughly canvassed. Dr. Norwood visited him in Cincinnati, and had with him tested the agent in the wards of the hospital with which he was then connected. Dr. N. vaunted the remedy in every condition in which the pulse was accelerated, whether in typhoid or sthenic types. His own views are that it is solely a cardiac sedative, and all its good effects come from the property it has of depressing the sympathetic system. The temptation is to give too great significance to the heart's action, and to consider that having reduced its excited action the disease has been abated. This does not follow: the heart may beat rapidly as an effort of nature to adjust or render normal some underlying diseased condition. When the proper class of cases for cardiac depressants shall have been found, the proper treatment will probably be by the joint action of aconite and veratrum; the combination will find a wider range of sedative action than either drug alone. Dr. Fearn, who deserves to be immortalized in the literature of this subject, may have discovered one of the valuable uses of depressants. For the present, his own experience and his knowledge that in the western and south-western sections of this country, where the virtues of veratrum have been thoroughly tested, it has lost ground, in addition to his therapeutic theories, lead him to believe that the curative properties of the drug, as applied to inflammatory disease, have been overestimated, and that its supposed curative action has been explained and based upon a line of fallacious reasoning.

Dr. C. H. Giberson. As to the use of veratrum in catarrhal and chest affections, he could not discover that it had any advantage over aconite, which has been largely used at home and abroad of late.

Dr. N. Ford. While in the country, some years ago, on a health trip, he saw veratrum used very freely and frequently by a country practitioner—his own uncle. On one occasion so very profound prostration was produced by it that death appeared imminent; the stimulants were poured into the patient, and on the second day he rallied. For himself, he was thoroughly alarmed at its effects. His uncle, however, was full of confidence in the remedy, and used it in nearly all inflammatory affections, regarding it as especially efficacious in diphtheria. Certainly the results of this treatment were more encouraging than those of other physicians in his neighborhood. His habit was to give ʒ ss. doses of the tincture every twenty minutes, so as to keep the pulse under the normal standard. He remained as much of the time as possible with his patient, and when called away directed the manner of stimulation to be employed if prostration should supervene. For himself, Dr. Ford could not adduce any experience in the use of such heroic medication.

Dr. J. T. Conkling. He now uses veratrum viride almost daily in cases where he formely used aconite; he carries a bottle of the fluid extract in his pocket. The acute symptoms of rheumatic fever, especially in young subjects, are greatly relieved by it. He gives two-drop doses every two hours. When some nausea is produced the effects of the remedy seem especially satisfactory.

Dr. B. F. Fessenden has lately treated two cases of hysterical convulsions with ten-drop doses of the fluid extract every two hours; prompt relief was afforded.

ON THE ADMINISTRATION OF VERATRUM VIRIDE.

Dr. E. R. Squibb, in reply to a question concerning the strength of the fluid extract made by him, stated that it is twice as strong as Norwood's tincture. The latter is often spoken of as a saturated tincture, but it is not that. The tincture necessarily varies greatly because of the imperfect description of its preparation; the different parts of the plants, the different methods of drying it, the different seasons of collecting, and some other causes, have tended to make Norwood's tincture a most uncertain article. These various avenues of error have latterly been closed by the exact methods of preparing the officinal extract. Of the alkaloids, veratria and veratroidia, the latter was supposed to be the cardiac sedative, and the former the irritant and emetic; their superiority to the fluid extract has not been demonstrated. The extract is the safer, since the drug is very susceptible to change under chemical manipulation. The tincture, and the extract as well, are permanent preparations. Dr. Fisher, of Sing Sing, N. Y., who in 1854 or '56 began the use of a certain package of the extract, and continued to use the same until lately, reports that the last drop seemed to be as potent as the first.

Two points in the administration of remedies should ever be borne in mind. First: the stomach under certain conditions is impassive—cannot absorb its contents; this is frequently the case in the obstetric administration of ergot; it might as well be put in a bag; double-dosing and unexpected results may in this way be brought about. Second: there must be used a proper vehicle, or menstruum, and an accurate measure. The fluid extract of veratrum, like the other extracts, is precipitable in water, and if given directly may collect on the teeth and gums. The country practitioner who, for the reason that he must do his own dispensing, studies the matter closely, and hits upon the most precise methods, commonly prescribes the extracts by measuring into a glass a number of teaspoonfuls equal to the number of doses to be given, and then adds the appropriate amount of the drug, directing that the medicine be stirred before being given.

Dr. H. Fearn has commonly adopted the plan of dropping the extract upon sugar before adding water to it.

Dr. B. A. Segur adverted to some experiments

made by him to test the advisability of administering fluid extracts by the drop. He found that the size of the drop varies from 2 to 4 drops to the minim, according to the shape of the vehicle from which it is dropped. So great was the disparity, that he had concluded no longer to prescribe by the drop.

Correspondence.

RELATIVE *vs.* POSITIVE RANK.

To the Editor of The Medical Record.

Sir:—As the rank of the Medical Staff of the Army is at present claiming the attention of the profession, permit me to make a few remarks upon a paragraph contained in an editorial in The Medical Record of the 15th December, 1873. In speaking of the action of the American Medical Association, you say:

"It will also be recollected that resolutions were passed expressing the opinion that the rank of the Medical Staff of the Army should be equal to the *relative rank* held by the same corps in the navy," etc. The italics are mine, for I desire to call special attention to the words *relative rank*, which in reality is no rank at all, as it has not and never can have a particle of value in the estimation of military or naval men. What is needed for the medical officers of both services is a positive or *bona fide* rank, unqualified by the terms relative or assimilated, or by any word which may in the slightest degree detract from its military value. Now in the navy, if a staff officer has the temerity to speak of his rank, he is immediately reminded that it is "merely *relative*," and he may be asked, with a shrug of the shoulders, to show any authority for rank in his commission. This is a crucial test; for the crestfallen staff-officer is aware that the word *relative* has not even a place in that document, and it is useless for him to appeal to Mr. Stevens's speech, or to refer to the Act of March 3d, for there is no getting over the fact that his commission does not say one word about rank in the sense in which that term is understood in the military world. The time has now arrived for a definite understanding about this matter; and medical officers should petition Congress for a *positive* status, avoiding carefully any phraseology which may imply an inferiority of position. Until this end be attained, and until every surgeon's commission shall show upon its face that he has been appointed a *surgeon with the rank of* (not with the assimilated or relative rank of) major, no amount of argument will convince his military confreres, or the public, that he is possessed of any legitimate rank whatever. With regard to military or naval titles, I believe that the majority of medical officers are opposed to their use, but it seems likely that eventually they will be obliged to adopt them, in order to enforce or exact that deference and obedience which soldiers and sailors are not willing to show to surgeons as surgeons, but which they are obliged to pay to their military grades of major or colonel. In a recent conversation with the medical officers of the Royal Victoria Hospital at Netly, upon this very subject, I found that English army surgeons were now alive to the necessity of substantive rank, *with a military title*, as in the case of paymasters and judge-advocate in our army, for they are evidently disheartened by the late "Order in Council" which has changed the title of Inspector-General to that of Surgeon-General, and otherwise diminished their status and military privileges.

If any proof be needed of the absurdity of *relative* rank, as it now exists in the navy, I would refer your readers to the "Regulations" of that branch of the service, in every page of which may be found some pitiful detraction from the rank of the staff. True, these officers are accorded precedence in court-martials and at funerals, etc., but they have often to fight for it; and if they are not fortunate enough to have a copy of the Act of March 3d in their pockets, they will probably find themselves out of place on many occasions. Civilians, of course, are not posted about the relations between professional and military grades, and military men are *indifferent* to them, consequently awkward mistakes occur; for it is not likely that a staff officer will rush up to his host or his commanding officer with a copy of the "Blue Book" in one hand and an Act of Congress in the other, in order to convince him of the necessity of his having a particular place or station. Again, we find the strange inconsistency which refuses military honors, salutes, etc., to staff officers, while it gives them to Supreme Court justices, consuls, and the civil members of the government. Why is this distinction made? Why, Mr. Editor, is a commodore in the line, or a *chargé d'affaires*, received with a salute of thirteen guns, while a commodore on the staff and the head of a government bureau is refused the same mark of respect?

Even after death these invidious distinctions are made. Minute-guns are fired at the funeral of a line officer, but powder is too valuable to be wasted over the carcass of a staff officer of *relative rank*. And so I might go on *ad infinitum*, enumerating these petty and contemptible efforts to belittle and degrade the relative rank of the staff. I must not, however, trespass further on your good-nature; but, in conclusion, I would again call attention to the evil entailed upon the navy by the use of the word *relative*, and to the absolute necessity for officers of both services to hold a *bona fide* rank which shall carry with it *all* the honors, privileges, and immunities of the line.

I am your obedient servant,

A Naval Surgeon.

CARBOLIC ACID IN TAPEWORM.

To the Editor of The Medical Record.

Sir:—In a recent issue of your valuable journal I noticed a letter from Dr. Bills, of the army, recommending the use of carbolic acid in the treatment of tapeworm.

Having a case on hand at the time, which had resisted the use of oil of turpentine and bepo for a month or six weeks, I immediately administered to him the following prescription: ℞. Acid. carbolic cryst., gr. ij.; glycyr. pulv., gr. iv. Ft. pil. No. 2. To be taken every three hours, beginning at 9 A.M. and continued until 9 P.M. This, followed in the morning by jalap and rhubarb, ten grains each. On the first day a few joints were passed, on the second a great number, and on the third the head and narrow portion came away, with a great number of small sections from one to three inches long. On the fourth day, treatment being kept up without further result, the medicine was discontinued.

The only sensation created in the stomach by the administration of such large quantities of the drug was a slight burning, not sufficient to inconvenience the patient. I look upon this as a perfect cure, and therefore report the case to you.

Very truly yours,

S. Austine Brown, M.D., U. S. N.

U. S. S. Kansas, Key West, Feb. 5, 1874.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from February 19, 1874, *to March* 4, 1874.

BAILEY, E. J., Surgeon.—To report in person to the Commanding General Dept. of California for assignment to duty. S. O. 45, A. G. O., March 2, '74.

WILSON, ALFRED D., Asst. Surgeon.—Granted leave of absence, on Surgeon's Certificate of Disability, for 60 days. S. O. 47, Mil. Division of the Atlantic, March 3, 1874.

SIMPSON, JOSIAH, Surgeon.—Died at Baltimore, Md., March 3, 1874.

Medical Items and News.

THE LUNACY LAWS.—The bill of Mr. Prince, in regard to the safe-keeping of lunatics, passed the Assembly by the vote of 81 to 9. The following is the bill in its amended shape: The Governor of the State is authorized to appoint for the City and County of New York not less than ten nor more than fifty, and in every other county not less than five nor more than fifteen, respectable physicians, to be known as Examiners of Lunacy, and to fill vacancies occurring among such examiners as they occur; and in every case arising in any county requiring, as now provided by law, the certificate of two physicians to require the confinement for safe-keeping of any person on the ground of lunacy, such certificate shall be required to be signed by two of the Examiners of Lunacy so appointed, resident in the county in which such case of lunacy is found; and no person shall be received as a lunatic in any asylum, public or private, without such certificate. The appointment of examiners, as aforesaid, shall be made on the recommendation of the Boards of Supervisors, or a majority of the members thereof, of the respective counties. Said examiners shall hold office during the pleasure of the Governor, and vacancies shall be filled in the same way in which the original appointments are made.

SURGEON JOSIAH SIMPSON, U. S. Army, died in Baltimore, Md., March 3, aged 59 years.

THE SIAMESE TWINS.—A further autopsical examination of the twins has verified the suspicion that the tract of "portal continuity" is really liver-tissue—a fact which would have seriously militated against the operation of a separation of the two bodies.

EXTENSION BY ADHESIVE PLASTER.—ITS FIRST EMPLOYMENT.—Dr. L. Mosely, President of the Bennington Co. (N. H.) Medical Society, in his annual address recently delivered before that body, gives quite an interesting account of his first use of adhesive plaster in the treatment of fracture. He says that in 1840, having a bad case of fracture of the thigh, in which the appliances, then in use, not being sufficient to make and maintain extension, he conceived the idea of spreading two strips of bandage, with adhesive plaster, applying the same on either side of the leg, tying the ends together, and making a loop under the foot, from which to make the extension. He was enabled to carry out his idea very effectually and successfully. Dr. Gregg, a relative of Dr. Mosely, on a visit to the latter, having seen this case, returned home soon after and put the idea in practice. Dr. Mosely continued the plan of extension in the treatment of every subsequent case, and believed it original. While on a visit to the New York Hospital in 1852 he was, however, surprised to find this method of extension in use in that institution. Mentioning the fact to Dr. Gregg, that gentleman informed him that he (Gregg) had showed a case under treatment to Dr. Crosby, who thought the idea a good one and adopted it in toto, subsequently reading a paper upon it before the New Hampshire State Medical Society. Since that time it has been known as "Crosby's method." Dr. Mosely proves himself to have made a very unfortunate mistake in not publishing his discovery at once, for as the matter now stands it is too late to lay any claim to the invention in question.

THE LATE DR. ROBERT I. GRAVES.—A number of the former pupils, friends, and admirers of the late Dr. Robert I. Graves, residing in different parts of the kingdom, have agreed to form a committee for the purpose of receiving subscriptions for a statue, which, in accordance with a resolution of the College of Physicians, is to be placed in the hall of the College.

It is to be hoped that the committee will receive cordial co-operation and support in the endeavor to raise so well deserved a memorial to this distinguished representative of the Irish school of medicine.

The committee is composed of William Stokes, A. Hudson, W. E. Wilde, Hon. Secretaries.

DEATH OF FORBES WINSLOW, M.D.—A telegram of the 4th instant announces the death of Dr. Winslow. This eminent physician and author was the son of a British officer, and was born at London in 1810. He began his professional studies in this city, and continued them on his return to London. In 1835 he became a member of the Royal College of Surgeons, London, and soon afterwards received his diploma as medical doctor at King's College, Aberdeen. He was also, about the same time, elected a Fellow of the Royal College of Physicians at Edinburgh. Dr. Winslow's love for metaphysical and philosophical reading led him almost instinctively to the investigation of mental diseases, and he became eventually the leading authority in England on all questions relating thereto. During some part of his early life he was on the literary staff of *The London Times*, and was also an industrious writer of books on medical topics, having produced before his thirty-fifth year two manuals, a "Medical Sketch-book," and an interesting work called "The Anatomy of Suicide." He afterward wrote several volumes relative to the responsibility of insane criminals, the management of lunatic asylums, and kindred subjects. His best known work, on "Obscure Diseases of the Brain," first published in 1860, has gone through four editions in London, and three in this country. *The London Lancet* considered it "the future text-book on mental and cerebral pathology," and another medical authority pronounced it "the master-effort of a great philosopher." Dr. Winslow founded, in 1848, *The Quarterly Journal of Psychological Medicine*, which he conducted for sixteen years. About 1847 he established Sussex House, Hammersmith, a private asylum for the insane, and for many years gave that institution his personal supervision. He had a large private practice in cases of insanity and diseases of the nervous system. He was also frequently consulted as a medical referee in cases of alleged insanity in the courts, great weight being accorded to his opinions.—*Tribune*, March 5th.

MEDICATED CANDLES.—An English manufacturing firm have introduced, for medical purposes, candles medicated with the balsams of which the vapor is most often beneficially inhaled by persons suffering from bronchial irritation and spasmodic asthma. Among these are benzoin, storax, etc.

THE WATER-SUPPLY of several cities, as calculated for each inhabitant, is as follows: Lisbon, 18 litres per diem; Montpelier and Nantes, 60; Brussels, 80; Paris, 100, soon to be 200 or 300; Madrid, 119; London, 130; Bordeaux, 170; Marseilles, 500; and in New York, 508.

DR. H. KNAPP has been appointed consulting oculist for the several institutions of the Department of Charities and Correction.

THE AMERICAN MICROSCOPICAL SOCIETY has elected the following officers: John B. Rich, M.D., President; O. G. Mason, Wm. H. Atkinson, M.D., and John Frey, Vice-Presidents; D. H. Goodwillie, M.D., Corresponding Secretary; J. P. Wintringham, Recording Secretary; Prof. T. d'Oremieulx, Treasurer; Samuel Jackson, Curator; S. G. Perry, Librarian.

BELLEVUE HOSPITAL MEDICAL COLLEGE.—The thirteenth annual commencement of this college was held at Steinway Hall, on the evening of Feb. 26, in the presence of a crowded audience. Music was furnished by the Twenty-second Regiment band, under the direction of P. S. Gilmore. Following a prayer by the Rev. Alfred B. Beach, D.D., chaplain of the college, and the conferring of degrees by Professor Isaac E. Taylor, M.D., the President of the Faculty, addresses were made by the Rev. J. M. Gallaher, and Smith E. Winn, of Kentucky, of the graduating class.

The first Taylor prize, of $100, to the one passing the best examination, was awarded to Frederick S. Dennis, of Newark, N. J., and the second Taylor prize, of $50, to David C. Cocks, of New York. Of the two Wood prizes, for the best preparations relating to surgical anatomy, only the second, of $25, was awarded. This was given to Mr. W. J. Alexander, of Mississippi, an under-graduate.

After the exercises at Steinway Hall the graduates, together with distinguished guests, were entertained by the Faculty of the College with an elegant supper at Delmonico's, at Fourteenth street and Fifth avenue.

After justice had been done to the dishes, President Taylor made a few remarks, referring to the significance of the occasion, to the severance of the ties which had been formed, by this farewell of graduation, and to the formation of a new and stronger union with those graduates to whom the reputation and prosperity of the college are now committed. He closed with the sentiment, "Our guests, the recent graduates of the Medical College of Bellevue Hospital—may health, happiness, and prosperity attend them." Henry Flood, of the graduating class, replied, enlarging upon the merits of the college, and asserting the claims of New York for recognition as the centre of medical instruction for the country.

President Taylor then called upon the "Nestor of Bellevue," Dr. James R. Wood, who recounted the early history of the hospital and of the college, and detailed the difficulties which he had found in extending the great principle of combining clinical with didactic teaching, whose glorious fruition he now looked upon.

Commissioner Henry Laimbeer was the next speaker. He set forth the importance of the voluntary medical assistance in the relief of the destitute suffering extended to the Board, and declared the greatness of the work done by the medical profession in the city, and the excellence of her medical colleges. Commissioner Meyer Stern was then called upon. He argued against giving the responsibility of appointing medical officers in the institutions and hospitals to the Commission of Charities and Correction, believing that professional men, better able to judge of the qualifications required, should do that work.

Sentiments and responses then quickly followed in the following order:

The health of Ex-Commissioner Jas. B. Nicholson, Esq., one of the oldest and truest friends of the college.

"Our Trustees."—Ever ready to clear the horizon and give us an uninterrupted *belle-vue*, to which Rev. Dr. Rogers responded.

The health of Geo. F. Talman, Esq., President of the Board of Trustees.

"Medical Ethics," responded to by Prof. A. B. Crosby.

"Universal Orthopædy—educating straight crooked feet, crooked ethics, and crooked morals," responded to by Prof. Lewis A. Sayre.

"The two Doctors—one for the body, one for the soul," responded to by Rev. J. N. Gallaher, D.D.

"Our reverend Chaplain, beneath whose beneficent influence we recline like Tityrus." "*Subtegmine fagi*," responded to by Rev. Alfred B. Beach, D.D.

"Woman—without whom we are not; with whom we are not much," Prof. B. Fordyce Barker.

The class of 74. Thos. C. Hennessy, of the Class.

COLLEGE OF PHYSICIANS AND SURGEONS, N. Y.—The Commencement Exercises of the College of Physicians and Surgeons took place at Steinway Hall, on the evening of March 3d. Among others present were Thurlow Weed, the Rev. Dr. McCosh, Prof. Chandler, the Rev. Dr. Storrs, Dr. Van Buren, Col. F. A. Conkling, Prof. Clarke, Prof. W. Parker, Prof. Dalton, Dr. J. Poole Garrish, Prof. St. John, and Prof. Jacobi. After various musical selections the degrees were conferred by Dr. E. D. Beadle upon the graduates.

The first graduating Faculty prize was awarded to Henry J. Hineman for the best thesis on "Naso-pharyngeal Polypus." The second graduating prize was awarded to Chas. H. Langdon for a thesis on "Aphasia." The Alumni Association prize of $200 was awarded to A. H. Buck, M.D., for a thesis on the "Mechanism of Hearing." The Thomas prize was awarded to J. E. Stillwell, for a report on "Clinique for Diseases of Women." The Otis prizes were awarded to Fred. A. Lyons and E. B. Foote, Jr., for the best report on "Venereal Lectures and Clinique." The Seguin prize was awarded to W. H. Welch for the best report on "Clinique for Nervous Disorders." A prize to be awarded annually after next year will be known as the Smith prize, and will consist of $100. In 1875 it will be given for the best report on "Hygiene in either of its Special Departments."

After the prizes had been awarded the valedictory address was delivered by Porter Farley, A.B., M.D. The Rev. Dr. Storrs then addressed the graduating class.

THE ANNUAL DINNER OF THE ALUMNI ASSOCIATION OF THE COLLEGE OF PHYSICIANS AND SURGEONS took place on Monday evening, March 2d, at Delmonico's. The table was spread for about 150 guests. Among those seated on the platform were the Hon. John R. Brady, the Rev. Dr. McCosh, Dr. Willard Parker, Prof. H. Drisler, the Rev. Dr. Montgomery, and many others. Dr. Charles M. Allin, President of the Association, occupied the chair. After partaking of a sumptuous repast, the cloth was removed and the following toasts were given and responded to: "Columbia College," responded to by Prof. H. Drisler; "Our Alma Mater," a fostering mother of the science and art of medicine, by Dr. Willard Parker; "The True Place of Money, Endowments in Institutions of Learn-

ing," Rev. Dr. James McCosh, of Princeton; "Sister Colleges"—may their only rivalry consist in striving to make the most complete and thorough provision for scientific study, Prof. Chas. E. Buckingham, of Harvard; Prof. Francis Bacon, of Yale; Prof. A. B. Crosby, of Bellevue, and Prof. W. H. Thomson, of the University Medical Department. Letters also were read from Professors Pepper, and Horatio C. Wood, Jr., of Philadelphia. "The Clergy"—fellow-workers with the physician in alleviating human woes, Rev. Dr. H. E. Montgomery; "The Lawyer and the Doctor"—frequently associated in the same field, our mutual interests demand a more intimate relationship, Judge Jas. R. Brady; "The Press"—the great remedial agent for torpidity of the public liver, and biliousness of the body politic, J. M. Bailey, Esq., of *The Danbury News*; "The Medical Staff of the Army and Navy"—our profession has but one voice, and that in favor of their rank being commensurate with their education and services, Dr. Edwd. Curtis, late of the U. S. Army; "Our Fellow Alumni Associations"—one in purpose, though different in organization, Prof. J. R. Leaming, of the University, and Prof. W. T. Lusk, of Bellevue.

THE THIRTY-THIRD ANNUAL COMMENCEMENT OF THE MEDICAL DEPARTMENT OF THE UNIVERSITY took place at Steinway Hall on the evening of February 17th ult., Chancellor Howard Crosby, D.D., presiding. Grafula's orchestra furnished excellent music for the occasion, and following the reading of the twenty-fifth chapter of Matthew and a prayer, the list of graduates was read.

The diplomas were then awarded, and the following gentlemen, mentioned as having particularly distinguished themselves in their examinations, had certificates of honor awarded them:

Barbarossa, Bentley, Bentz, Brown, Carreau, Denhard, Desvernine, Doherty, Gutierrez, Hanford, Hill, Jimenez, Kissam, McAuley, McCormack, McLochlin, Martin, Morrogh, Piercy, Pinto, Pray, Ransom, Spillane, and Wilbur.

The first prize, by Prof. Budd, a case of obstetrical instruments, was awarded to C. F. Ainsworth, who also received Prof. Loomis's prize, another case of instruments. Prof. Thomson's prize was won by J. S. Carreau. The prize of Prof. Roosa, a case of instruments for the eye and ear, was gained by H. F. Kingsley. Prof. Arnold's prize of a microscope was awarded to L. Gutierrez, who also took the prize of $50, offered by J. Boyce. The prize offered by Prof. Elsberg, $50, was given to P. J. Keegan. Besides these there were the three "Mott Medals." The gold one was won by John Wilbur, the silver by G. A. Balcom, and the bronze by S. B. Young.

Mr. Whitelaw Reid then made some exceedingly pertinent remarks, and was followed by Prof. Budd, who delivered the valedictory.

THE ANNUAL MEETING OF THE ALUMNI ASSOCIATION of the Medical Department of the University of the City of New York was held Feb. 6th, at which the following officers were elected for the coming year:

President: James R. Leaming, class of '49. *Vice-Presidents:* A. L. Carroll, class of '55; Wm. Cannif, class of '54; S. Fleet Speir, class of '60; Bolling A. Pope, class of '56; Thos. C. Finnell, class of '49; J. H. Hobart Burge, class of '48. *Secretary:* Charles Inslee Pardee, class of '60. *Treasurer:* D. B. St. John Roosa, class of '60. *Executive Committee:* James H. Anderson, class of '60; Joseph S. Monell, class of '61; S. Seabury Jones, class of '69; C. Dixon Varley, class of '44; Harvey S. Gay, class of '49; Joseph W. Howe, class of '66; Stephen J. Clark, class of '61; F. R. S. Drake, class of '71; F. Le Roy Satterlee, class of '68; A. E. McDonald, class of '70; Joseph J. Hull, class of '58; and John W. Hunt, class of '59.

AT A MEETING OF THE ALUMNI ASSOCIATION OF THE COLLEGE OF PHYSICIANS AND SURGEONS, held Wednesday evening, Feb. 25, the following officers were elected for the ensuing year:

President: C. M. Allin. *Vice-President:* Alfred S. Purdy. *Secretary:* George Bayles. *Treasurer:* [not yet appointed]. *Councillors:* C. R. Agnew, C. M. Allin, A. Brayton Ball, J. S. Banks, Robert A. Barry, George Bayles, John N. Beekman, D. Tilden Brown, Albert H. Buck, Gurdon Buck, H. W. Buel, F. A. Burrall, T. M. Cheesman, J. W. G. Clements, Francis Delafield, Stephen Dodge, Alexander M. Docherty, W. H. Draper, Abraham Du Bois, Ellsworth Eliot, William S. Ely, Henry C. Eno, Porter Farley, Frank P. Foster, John Shrady, A. H. Smith, G. M. Smith, T. Blanche Smith, Benjamin Swan, Edw. H. Van Deusen, Henry F. Walker, Robert Watts, George G. Wheelock, Robt. F. Weir. *Trustees:* Robert A. Barry, D. Tilden Brown, H. C. Eno, T. H. Satterthwaite, C. R. Agnew. *Executive Committee:* A. H. Smith, George A. Peters, W. H. Draper, Robert F. Weir, Albert H. Buck, T. Matlack Cheesman.

The Alumni Prize of $200 was awarded by the Committee to Albert H. Buck, for his paper on "The Mechanism of Hearing." A similar prize is offered for the best essay to be submitted at the meeting of 1875.

The Treasurer reported that there are between $3,500 and $3,600 belonging to the "Alumni Prize Essay Fund," which is drawing interest, and that about $55 had been subscribed during the past year. "The General Alumni Fund" amounts to $4,753, and the "Joseph Mather Smith Fund" to about $1,500.

It was reported that by the recent action of the Faculty of the College of Physicians and Surgeons, the President of the Alumni Association is entitled to a seat in the Board of Trustees of the College.

THE ANNUAL MEETING OF THE ALUMNI ASSOCIATION OF THE BELLEVUE HOSPITAL MEDICAL COLLEGE was held at the College, Monday evening, March 9th, and the following officers elected for the ensuing year: *President*, T. R. Pooley; *1st Vice-President*, J. D. Bryant; *2d Vice-President*, Robert Newman; *Recording Secretary*, George W. Wells; *Corresponding Secretary*, C. A. Neale; *Treasurer*, Henry Raphael; *Historian*, F. A. Castle.

ALUMNI DINNER.—The third annual dinner of the Alumni of the Medical Department of the University of the City of New York took place at Delmonico's on the evening of the 16th ult. Shortly after 6 o'clock about fifty guests sat down before a superb bill of fare, and proceeded to discuss the edibles with a commendable gusto. Prof. Jas. R. Leaming presided. After enjoying the material elements of the ménu the company listened with evident gratification to the following toasts, and the responses made thereto by the gentlemen indicated:

The University.—Her training such that she may furnish and instruct great teachers, and never seek for aid out of herself. Rev. Howard Crosby, D.D., Chancellor; Wm. R. Martin, Esq.

The Medical Department.—A vigorous branch. May its fruit ripen in the sunshine of favor that sheds lustre on the parent tree. Prof. Wm. H. Thomson, M.D.

Our Sister Departments.—Laboring in a common cause, let us also labor for a closer union. Prof. E. A. Johnson.

Our Sister Alumni Associations.—We rejoice at their continued prosperity, and welcome them through their representatives. Prof. C. R. Agnew, M.D.; Prof. W. T. Lusk, M.D.

Medical Education.—Its object; the accomplished physician, an ornament to society and his profession. Prof. F. D. Weisse.

The Press.—A power mighty for good or ill; may it only be devoted to that which elevates and enlightens. Fred. A. Castle, M.D.

Our Alumni.—Represented as we are in every quarter of the globe, we are honored by the presence of a distinguished brother from the neighboring Dominion. Prof. Samuel Hall.

Our Hospitals and Dispensaries.—For the poor, relief; for the rich, reliance; for all, security. Prof. William A. Hammond, M.D., Class of 1848.

Our Dead.

Woman.—

> "For where thou art there is the world itself,
> With every several pleasure in the world,
> And where thou art not, desolation."

James H. Anderson, M.D., Class of 1860.

Letters were read from Prof. Martin Payne, Parke Godwin, Wm. Cannif, of Canada, John Taylor Johnston, George F. Shrady, and others. The occasion proved one worthy of a place among the pleasant associations of the University.

Our Influence with the Public.—The *Western Lancet*, San Francisco, in commenting upon our recent editorial upon this topic says: "Although our office of Coroner is now filled by a medical gentleman in lieu of an undertaker; that we have a 'Board of Health,' composed of representatives of the profession, instead of these matters being entrusted to laymen; that we have one representative in each branch of our local legislature, and several in the State Legislature, who doubtless will do all in their power to secure proper laws for the moral and sanitary protection of their constituents, and thus contribute their quota to the many reforms necessary; yet, as we have said, there is more to be accomplished, and this can only be done by constant contact with the people; the discussion of subjects with reference to the education of the masses, either from the rostrum of the lecture-room or the daily intercourse of the profession with themselves and with the community in which they may live; the writing of sensible articles for the press, couched in plain yet dignified language, and having the aim in view of benefiting, in some manner, either in health or otherwise, the people to whom it is addressed. We are perfectly aware that these practices are open to abuse, yet what is there that is not liable to abuse? We hold that it is only through these means that the profession of medicine will ever exert that influence over the people that the condition of its votaries entitles it to, and that the people so much need."

We quote the following from the *Chicago Medical Journal:*

The Abuse of Medical Charities.—The New York Medical Record (Sept. 1, 1873) contains an admirable editorial upon "The Abuse of Medical Charities," which concludes with the following: "When a profession can claim to treat gratuitously three hundred thousand paupers annually in New York City, not counting those in hospital, and knows at the same time that one out of every ten of the young medical men in that city can barely earn a living, we think it is about time to look into the matter, to consider whether the occasion is not opportune for proving the force of the proverb, 'Charity begins at home.'" We hope that every reader of the *Journal* will read the entire article and make the application to his own locality, to which it is doubtless quite as appropriate as to that for which it was written. For the little consideration which the medical profession enjoys throughout this country, it is indebted to some of its own members, who, avaricious of practice and notoriety, have sought to acquire them by cheapening their own services, and thus taught society to fix a very low valuation upon that which is eagerly offered without fee or reward.

The world's standard of value is cost; that which costs little is, in the popular estimate, worth as little. At the present time the pay of the average physician is actually lower than that of the average mechanic, relatively very far below; and why? because the public knows it must pay for the services of the mechanic, whereas those of the physician can be obtained for nothing, or, at the most, for a promise to pay, which is never meant to be redeemed, and of which the average physician has not the moral courage to enforce the fulfilment. This cheapening of their profession works a double injury and perpetuates itself; first, by oppressing the young and obscure, whose services are esteemed valueless when the elders hold their own so cheap; and secondly, by thus discouraging the entrance into the profession of those who would maintain its honor and advance its interests. Thus the professional standard is actually approximated to that which it is made to appear, by some pseudo-philanthropists in its ranks. The medical profession appears of late to have abandoned its *esprit de corps*, and its members to have concentrated and individualized their interests; instead of elevating the honor, dignity, and importance of their profession, and therewith their own as of integral parts of it, too many seem to be striving to rise alone in solitary grandeur upon its ruins.

There is one method of elevating the dignity of the profession, and of increasing the value of its services, which is within the reach of every physician; a method entirely within the comprehension of the public, and which it will most thoroughly appreciate, which, if adopted and maintained consistently and persistently, will, in one single year, advance our profession in the public respect to a higher degree than can be accomplished in ten by any other means. The method is this: be strictly conscientious in rendering the best services within your capacity to your patients, and equally conscientious to yourselves in exacting a full equivalent for them, to be paid when the services are rendered; not at the end of the month, quarter, or year, but on the spot. In other words, treat your patient as he treats you. Let us ask no protection for our profession, no privileges, but simply the privilege to protect ourselves.

Rankin's Abstract.—We observe the editor of Rankin, while giving notice of the discontinuance of his "Abstract," remarks, there appears to be little need of half-yearly retrospects in that country; but we are enabled to state, by the following extract from a recent communication from Dr. Braithwaite to the American publisher, that his "Retrospect" still continues its original popularity:

"I am glad to say that my work keeps up its popularity in Great Britain, notwithstanding formidable competition. Having been above forty-three years working at bedside practice, it may be that I know what is really wanted, and what is not wanted to be known, and am able to select such matter as is most wanted by busy practitioners; this may be the secret of my success."

Medical Department of Life Insurance.

WHAT EFFECT DOES SYPHILIS HAVE UPON THE DURATION OF LIFE?

By FRED. R. STURGIS, M.D.,

ASSIST. SURG. MANHATTAN EYE AND EAR HOSPITAL, N. Y. CITY.

MR. EDITOR:—Your welcome letter was duly received a short time since, and in it I found enclosed the list of questions you promised me, bearing upon the question, "What influence does syphilis have upon the duration of life as regards insurance?"

The question, sir, is a difficult one to answer, and indeed the reply must in its very nature be approximative, and not absolute, there being so many points upon which no positive reply could be given. Do not, therefore, feel disappointed if, at the outset, I warn you that what I am about to write must be accepted as approaching to, and I trust very closely, the truth, and yet is not the truth itself.

Your first question is, "In the upper and middle classes does syphilis to any extent shorten the 'expectation of life?' in other words, 'Is a man who has had true syphilis as likely to attain the full 'expectation' assigned to him at any given age above twenty-five, as another man of the same age who has not had 'syphilis;' both men, of course, to be in all other respects subject to the same circumstances of life and hygienic influence?"

The mere fact of a man having had acquired syphilis does not of necessity imply that his life is shortened or blighted, and in the upper classes the chances are very largely in favor of his entire recovery from the disease; and by that I mean he will live his life as comfortably and as healthily as his companions who have escaped infection. This applies to the majority of cases; there are, undoubtedly, some whom it would be unwise to accept as risks, but of these I shall speak more fully further on.

Fortunately for the human family, this disease has much abated in severity and virulence since the days of the earlier writers on the subject, since the time of Grünpeck (who was himself a victim), Fracastor, Von Hütten, and others. Then the unlucky wight who contracted syphilis was a pariah and an outcast, shunned by all acquaintance and friends, and doomed to solitude. Were the same course pursued now, dear Doctor, imagine what a howling waste society would become!

The picture drawn for us by these older writers was a truly horrible one, and let us be thankful that we of the present see such but seldom.

Nowadays it is unusual to see the frightful loss of tissue which was not uncommon a century ago, and I think we may safely lay it down as a rule, that the disease seldom goes beyond the earlier stages. In the lower classes, and in those who are neglectful of treatment, or who are subject to some hereditary taint, the disease assumes its worst forms, evincing, as it were, its capacity for mischief.

But even in the lower classes it is surprising to see how seldom syphilis proves fatal. I have compiled the following statistics from the Records of the London Hospitals, and from other sources, and Hospital Records are specially to be preferred, as among the lower classes, who constitute the bulk of patients, the fatality is more likely to be greater than among the upper classes. At St. Thomas's Hospital, in the six years from 1866 to 1871 inclusive, 130 cases were treated; of these 6 died (a little over 4 per cent.).

At St. Bartholomew's Hospital, in the twelve years from 1860 to 1871 inclusive, 2,292 cases were treated; of these 23 died (a little over 1 per cent.). At the London Hospital, for the three years from 1863 to 1865 inclusive, 209 were treated; of these 7 died (a little over 3 per cent.). At the St. George's Hospital, for the five years from 1866 to 1870 inclusive, 307 cases were treated; of these 5 died (or about 1½ per cent.).

Adding these numbers together, we find the total amount to be cases = 2,938, deaths 41, or nearly 1½ per cent.

I subjoin the statistics in detail. I have used those of the secondary and tertiary forms only, and not the primary or congenital ones, as it would be manifestly improper to do so; the former, because they are not fatal, the latter, because they occur in persons who would not be insured on account of their age.

	Number of cases.	Cured and relieved.	Unrelieved.	Died.	Percentage of deaths to whole No. of cases.	Discharged for other than medical reasons.	Remaining in Hospital.
St. Thomas.							
1866	29	25	2	2			
1867	6	4	—	2			
1868	11	7	4	—			
1869	29	26	3	—			
1870	18	15	2	1			
1871	37	33	3	1			
	130	110	14	6	+4		
St. Bartholomew.							
1860–1864 inclusive.	900	894		6			
1865	249	203	5	2		39	
1866	257	220	5	1		31	
1867	220	192		4		24	
1868 (No record.)							
1869	186	156		2			28
1870	261	224	4	7			26
1871	219	203	2	1			13
	2292	2092	16	23	+1	94	67
London.							
1863	41	37		3			1
1864	124	102	1	3		4	14
1865	44	39	4	1			
	209	178	5	7	+3	4	15
St. George.							
1866	59	—	1				
1867	53	—	1				
1868	59	—	1				
1869	57	—	1				
1870	59	—	1				
	307		5		1⅗		

Total No. of cases	2938
" " " deaths	41
Percentage of deaths to whole No. of cases	+1

I am very sorry that I have so few statistics to present, but would suggest to you, in your capacity as medical adviser to a life insurance company, to find out, if possible, what proportion of deaths among your policy-holders was due to syphilis. In that way only can you arrive at anything settled, as of the hospital cases we do not know how many ultimately died of their disease, nor do I know any way of finding out.

If we turn to the records of mortality in large cities and in different countries, we find that syphilis is not such a fatal disease as compared with typhoid, phthisis, etc. I append for your consideration the mortuary figures of New York and Philadelphia for 1871, as

taken from the reports of the State Boards of Health of those cities, and of London, copied from the Registrar-General's Report for the same year:

	Total No. Deaths.		Deaths due to Syphilis.		
New York.....	26,976	....	142,	a little over	5-10 per cent.
Philadelphia....	16,993	....	19,	"	1-10 "
London.....	80,434	....	352,	"	4-10 "

Here are the death records for the United States and England:

	Total Deaths.	From Syphilis.		
U. States, census of 1870,	492,263	590, a little over	1-10	per cent.
England, " 1871,	514,879	1,742, or "	3-10	"

On the causes of death the hospital reports are very vague, but such as they are, I give them you.

Of the six deaths at St. Thomas's Hospital, the cause of only one is given, viz., where the patient, entering in a semi-comatose condition, was found to be suffering from gummata on the internal surface of the left middle lobe and right anterior lobe of cerebrum.

The causes of death among the twenty-three cases at St. Bartholomew are as follows: 1 tuberculosis, apparently independent of syphilis; 9 of exhaustion (2 of these after tracheotomy); 2 of pleurisy and bronchitis, not stated as syphilitic; 1 from peritonitis and exhaustion from anal fistula; and 1 from erysipelas. The causes in the cases of the remaining 9 are not given.

None of the causes of death among the patients of the London are given; and among the St. George's but one, *i.e.*, œdema glottidis, from necrosis of the thyroid cartilage and denudation of the perichondrium.

Meagre and unsatisfactory as are the hospital notes with regard to the deaths, one cause strikes us at the first glance as prominent, and that is exhaustion. I pointed out, in a paper contributed to the *American Journal of the Medical Sciences* for July, 1873, how dangerous this form of the disease is, and what bearing it has upon the prognosis. My opinion remains the same as when I first wrote the paragraph, which is as follows:

"One of the most serious, and, fortunately, one of the least common of the results of syphilis, is that known as 'syphilitic cachexia,' where it would seem as though the system, becoming entirely saturated by the poison, had lost all functional and vital power, the patient sinks slowly, inch by inch, in spite of all that can be done, and finally succumbs to some intercurrent disease, the severity of which is entirely disproportionate to the result. As may readily be conceived, the prognosis is very unfavorable."

To revert for a moment to our figures. We find the average percentage to be about 2 per cent., and that, too, in the lower classes, among whom we should expect to find syphilis most fatal. Granting these premises, the probabilities are in favor of the percentage among the rich and well-to-do being much less. One objection may here be urged—and a very pertinent one—that among the better classes every effort would be made to suppress the real cause of death, and that the physician *might be unable* to assign the proximate or even the remote cause.

But among the lower classes these considerations would be apt to have but little weight, and if among them we find such a small percentage, I think, in the absence of any evidence to the contrary, we may fairly argue the proportion among the upper classes as inconsiderable. Saying it is as much as 1 per cent., would the risk be such a bad one?

Before leaving this subject, my dear Doctor, I may be pardoned if I quote from one who is considered authority in Germany, and by comparing his statistics see how far they agree with those already compiled:

"The total of syphilitic patients in the various wards of the k. k. allgem. Krankenhaus, in Vienna, for the year 1862, amounted to 1,097; of these 667 were males, 430 females.

"The number of deaths was 8; 6 males, 2 females. Percentage = 7-10 per cent.

"The causes of death were, for the most part, tuberculosis pulmonum, nephritis albuminurica; one woman died from perimetritis septica."*

Query 2.—"What are the circumstances (as regards *habits, age, occupation, climate, social standing, marriage or celibacy*, and *physique*) which favor or hasten this deteriorating influence of syphilis?"

'For convenience' sake I shall divide these various influences into two different groups: 1st, the hygienic; and 2d, the physiological. Among the first would be ranked habits, occupation, climate, social standing, marriage or celibacy; and among the second, physique, age, race, and hereditary tendencies.

To commence with the first group, the first question which challenges our attention is, What part do habits play in this disease?

I must beg you to bear in mind the two groups into which acquired syphilis may be divided, viz.: the benign and the malignant; and this is important, because your opinion will vary according as you have to deal with one or the other. Poverty, misery, insufficient food, and excessive drink, all play their part in intensifying the symptoms of this disease, and transform what might, perhaps, have been a mild attack, into one severe and dangerous. The picture drawn by Zeissl,† as to the effects of dirt, poverty, and defective sanitary measures, is not overdone, and the simple reason why we see so little of it is, because our country is not so thickly populated, in proportion to its size, as is Austria. But here, in New York, those curious in such matters can see some of the effects of these agents by visiting the poor quarters of this city and the dispensaries. Lancereaux (Traité historique et pratique de la Syphilis, 1866), gives a case bearing upon the influence alcohol exercises upon this disease, and its instructiveness shall be my excuse for introducing it here.

"A patient who had been under my care for more than a year for a visceral syphilis (of the liver, spleen, and ganglia), finding himself better, and believing himself actually well, thought he might, without danger, abate the severity of the régime which had been prescribed. But an exostosis of the anterior portion of the forehead appeared as the consequence of a somewhat prolonged debauch. Under appropriate remedies this rapidly disappeared. Some while after, the patient, believing himself entirely well, indulged in another debauch, which was followed by a fresh exostosis at the same point."

Occupation has only an indirect bearing upon syphilis, and such trades or business which are in themselves confining or unhealthy, as tailoring, cobbling, and the like, are not the best for syphilitics.

Climate is an important factor in the problem which we are trying to solve, and here is a point where physicians can give advice with better chance of being listened to than where a man's habits are concerned. Extremes of temperature, whether of heat or cold, as well as sudden variations, are bad, and the countries included in what is known as the temperate zone are where syphilis shows its mildest characters.

In summing up the evidence upon this point, Lan-

* Zeissl. Lehrbuch der Syph., etc., 2d ed., vol. ii., p. 83.
† Lehrbuch der Syphilis, etc., 2d ed., vol. ii., p. 14.

cereaux (op. cit.) says: "En résumé, un climat qui varie peu, dont la temperature est modérée et à peine differente de celle du lieu où la maladie a été contractée est celui qu'à l'exemple de Sydenham on doit rechercher de préférence pour les syphilitiques," and Swediaur in his "Traité des maladies Syphilitiques," t. ii., p. 67, is no less positive when he writes, "La syphilis qui se montre pour la première fois dans un climat quelconque, est très violente dans les effets; *mais elle l'est beaucoup plus lorsqu'elle est importée d'un pays chaud dans un climat froid.*"

Social Standing.—Some of what was said under the head of hygiene will apply here, inasmuch as a good social position preargues more or less comfort and ability to provide for one's health and guard against illness. Bad ventilation, lack of warmth, insufficient or poor food, by acting as so many depressing agents, furnish the disease opportunities for extending its ravages and assuming its worst phases.

Marriage or Celibacy.—Marriage or celibacy, *per se*, influences the course of syphilis only so far as they affect the general health or well-being of the patient, and marriage would perhaps diminish the chances of the later stages supervening by lessening the incentives to debauchery and loss of the general health and strength. But beyond that I think it would have very little influence.

In this connection I would call to your mind Dr. Stark's statistics of the comparative longevity of married and single people, in which the former have decidedly the advantage.

This brings us to the second group, the physiological, under which were included physique, age, race, and hereditary tendencies.

The first, physique, must be dealt with in a general way, for it stands to reason, cæteris paribus, that a robust person of strong physique and good constitution will stand a better chance of overcoming the disease than will a weak and sickly one.

The second, age, is perhaps the most important factor in this intricate and difficult problem. As Ricord has pithily put it, "Il ne fait pas bon de prendre la vérole dans la vieillesse," and he might have added, "ni dans la jeunesse." Statistics show that a large percentage of deaths from syphilis occur in those under 5 years of age; but as this does not concern us at the present moment, we may pass it by with this simple notice of it. Most of the authorities of the present day are agreed in the opinion that syphilis, when contracted in advanced life, is more difficult of recovery than when the infection occurs in youth, and a moment's reflection will show how much more likely is a degenerative and exhausting disease to work evil in the aged than in the young and tolerably robust adult.

Race.—There would seem to be good grounds for believing that syphilis is more malignant in some races of people than in others; thus, for example, among the negroes, I have noticed their lesions are more apt to take on the ulcerative forms, and to be less amenable to treatment; and my friend Dr. Charles S. Bull, of St. Louis, in a paper on "Syphilitic Iritis and its Complications," writes thus: "My attention has been called, during the last few months, to the peculiarly unfavorable course which syphilitic iritis seems to run, when it occurs in negroes; and on mentioning the subject to several of my colleagues, I was informed they had observed the same thing." Not only is this the case among the negroes, but among the inhabitants of the islands of the Pacific, and among the Indians of the continents of North and South America. Although, no doubt, partly dependent upon defective hygienic conditions of life, much of it is, I believe, due to race differences.

(To be continued.)

THE MORTALITY OF PHTHISIS.

SINCE the publication of my report on the causes of 1,000 deaths (MEDICAL RECORD, Jan. 15th, 1874), my attention has been called to the fact that, in comparing the company's mortality from consumption with that which prevails in the country at large from the same disease, no account has been taken of the circumstance that the community of policy-holders differs from the population at large in having among its number no individuals under 18 or 20 years of age, and very few over 65. The comparison we have made, ought, therefore to be modified. From the total number of deaths for 1870, as ascertained by the last census, and from the 1,000 deaths in the company's experience, we should deduct all those which occurred before the 20th or after the 64th year of life. The same should be done in the case of the deaths from consumption. Placing the results together in the form of a table, we have the following:

	Total deaths from all causes. 20 to 65 years.	Deaths from Consumption. 20 to 65 years.	Ratio.
Community at Large.	100,472	24,978	25 per cent.
Company's Experience.	969	268	27 per cent.

In other words, the company's mortality from consumption is but little greater than that which prevails in the community at large.

Bearing in mind the eagerness of phthisical persons to insure their lives, and the difficulty of diagnosticating the disease in its early stages, especially when the applicant withholds important facts from the examiner's knowledge, I am rather surprised than otherwise that the results are no worse for the company. But I am told by the actuary of the company that a still further deduction—one, however, that is hardly susceptible of being computed in numbers—should be made on account of the withdrawal every year of a large number of healthy lives from the community of the insured, while those who remain comprise among their number an undue proportion of diseased or weak lives. In a community thus peculiarly constituted we should certainly expect a proportionately heavier mortality from consumption and other similar chronic diseases than among the population at large. A. H. B.

THE CHINESE AND THE JAPANESE.*

A COMPARISON OF THEIR PHYSICAL TYPES.

BY ED. MADIER DE MONTJAU.

TRANSLATED FROM THE FRENCH BY NORMAND SMITH, M.D., OF NEW YORK.

I SHALL attempt to trace some of the points of resemblance and difference which unite and separate the populations of China and Japan; and, in doing this, my communication will have at least the merit of not

* From the *Revue Scientifique de la France et de l'Étranger*, 10 Janvier, 1874.

being borrowed either from the reports of officials, from books or narrations of travellers, or from the conversation of my friends.

I shall limit myself to telling you what I have seen and learned during a long sojourn in the two countries. The majority of travellers are very superficial observers; I desire no other proof of it than those words so often repeated by Europeans, especially as regards the difficulties presented by the administration of criminal justice: "All Chinese are alike, all Japanese are alike." It is very true that among the populations, the color of whose hair is never lighter than dark chestnut, whose complexion never varies except from pale bilious brown to the yellowish or dark bistre of the Caffre or of the mulatto, who almost never have a beard, and whose body is almost always absolutely smooth, among these populations it is true that the individualities will be less striking than among our European populations, where we find the blonde, the brown, the chestnut, and the red. Add to this the fact that both of these populations present in every respect much less striking inequalities than our own as regards form, muscular development, regularity of feet and hands, straightness of the lower extremities, abundance of hair and low grade of type of the skull (*dégradation calvique*). All this is true, particularly when you apply it only to provincial regions. The barefooted and lightly clothed Cooly of Canton is much smaller, more muscular, more swarthy than the peasant of Ning-po or of Soutcheou and of the environs of Shanghai. The latter is generally pale, and when clothed in white or gray, set off by his enormous Tartar boots, looks like a colossus, particularly when dressed in his coarse winter furs. The Japanese of Satsouma and Tosa are nearly black, while at Yedo the men and women are often so white as to efface all recollection of a yellow race. But, taken collectively by provinces, it is true that the men and women in China and Japan are more alike physically than in any one province of Europe, or, more particularly, in any one province of France.

Some of the causes of this are very evident, and they do not appear to me to place our too much boasted European civilization in the most favorable light, neither do they speak altogether well for the Orient or China.

I have reference only to the poorer classes. The various grades of society differ everywhere. In France the higher classes are taller. It is the same in China; and, in that country, while obesity and leanness are rare among the common people, they are frequent, often excessive, among the rich, and particularly in official circles. Obesity may be explained by their way of living, as physical inertia is in honor among the Chinese. Fat people are therefore much respected. In the same way as Cæsar was proud of the sobriquet *Felix*, which his soldiers had given him, so the rich Chinese are proud of being fat. "His food agrees with him, he succeeds in everything he undertakes," they say, and all regard him with envy and try to be near him and live under his protection. Leanness is always found among those leading an active life, *e.g.*, the merchants, the shopkeepers, the clerks. Extreme leanness is the lot of the opium-smokers. Hideous leanness is the lot of the beggars, who, although dying of hunger, will sell even their cues in order to obtain the *Indian drug*. These very cues find their way to Europe, where they are used in making chignons.

In Japan obesity or extreme leanness is rarely found. The middle class, less numerous than in China, is much less vigorous than the poor class, but in stature the two classes differ less than in that country.

With regard to the aristocracy, which in Japan is strong and numerous, and in China is composed almost only of office-holders, I will say that in China the aristocracy presents all the popular types, because it is recruited from the *parvenus* of all classes and all provinces. It presents also a good number of Mantchou types, because the Mantchous are in favor at court. It must not be forgotten that the famous literary examinations of China are not the only seminary of functionaryism. For example, the viceroy of Canton, one of the best, most judicious, most pacific of men, and most accessible to strangers, is an old Mantchou general, and certainly with very little education. There are also mandarins who have become such through the influence of money, with or without examinations.

In Japan the aristocracy is, or rather was, hereditary, with landed estates, and it never contracted those marriages which were formerly called *mésalliances*. We have never seen any type of Japanese aristocracy physically very powerful. Among the monuments of Japanese art we do not find the aristocracy much more beautiful than the rest of Japanese humanity. Only the representations of historical myths make their chiefs herculean demi-gods. Must we believe these popular images of Taïkau-Sama and Co., or admit that the Japanese grandees have degenerated since the Conquest? If we accept the latter view, their condition would be similar to that of the grandees of Spain, who have become the most stunted men of the Iberian peninsula, owing to their system of strict classification of marriages.

I wish particularly to state that the least attentive observer can distinguish in the same provinces races which differ very decidedly from one another. In Kouang-toung, for example, the Hakas and the Pountis, both men and women, are very different. The former have more delicate features and more slender forms; they are more laborious, less subtle, more courageous. The inhabitants of Canton are very much feared by the people of the North. The valiant Coolies, who, for eight piasters a month, exposed their lives while placing ladders against the forts of Takou for our soldiers, were from Canton. At Tientsin the porters resemble the Coreans. At Simonoseki also there are many Corean types. At Nagasaki there are many Soutchouanes, and some skins that are very white in spite of a broiling sun and an overheated atmosphere.

I shall finish what I have to say on this point by stating that the yellow races blush accidentally under the influence of emotion, though the contrary has been affirmed. I have myself seen a young and very pretty Chinese girl blush up to the whites of her eyes.

Finally, I will add that in China, to a moderate extent, and particularly in Japan, there are brown complexions so copper-colored as to approach almost to the color of oxide of iron, or of red ochre, and who remind me of the Indians whom I have seen in North America. In China we find, by way of exception, although frequently, heads of such an exaggerated ovoid shape that, were it not for the height of the nose, they would remind us of the Aztecs. In Japan we find the face long or square, the forehead bony, the cheek-bones enormous, the jaws massive, the teeth thick, the skull cubical or ovoid, the forehead flat or convex, but very low, the nose short, broad at the base, but curved; in fact the whole appearance, taken in connection with the complexion, reminds one of the Red-skins. I fear that I shall be accused of scientific boldness, and shall therefore refrain from drawing conclusions. I will simply relate what I have seen. In adding that in the great mass of Red-skins the root

of the nose is scarcely developed, and that although in Japan and China the absence of the prominence of the nose, as far as to the inferior half, is the universal rule, it seemed to me that in Japan this rule is a little less universal in this sense, that we sometimes find a slight prominence of the nose on a level with the iris, especially in individuals of light complexion. This question of the nose appears to me to be one of great importance. I have seen quantities of Chinese of several provinces, also Japanese of almost all regions, except perhaps those of the extreme north, many Malays, a good number of Annamites, and several dozen Coreans, all of whom have scarcely any prominence in the upper half of the nose. The nose of the Malays and Annamites is especially repulsive, as it does not seem to have any bone or cartilage. Whether small or large, more or less flattened, it reminds one of certain kinds of bears and particularly of certain large monkeys; it seems to be composed of skin early wrinkled by age. This nose, more than any other, has a beastly expression. The Coreans generally have the nose proportionately large for their size. Their nose, like their whole body, is more bony than the nose and the body of other yellow races, as far as I have been able to observe them. Among them I have also seen people shaped exactly like Red-skins. Their complexion often borders on a most decided chocolate color. As much as I may fear to be called an heretic, I cannot but insist on the term Red-skins. Red-skins have, like the Chinese and Japanese, well-rounded, almost feminine forms, combined with the greatest athletic development. They have, like the Chinese, the pectoral muscles very little developed; the muscles of the arm less powerful than those of the leg. Their nose, much more bony, more curved than that of a very large majority of the Chinese, differs less from that of many Japanese; the contour is in every respect more ovoid. But one should see the Japanese wrestlers at exercise; they are very numerous, large, fat, generally very well fed; they live a life of indolence and healthful exercise. Look at them quite naked, with their hair fastened up *à la chinoise*, as the ladies say, and tied in the middle of the back part of the head; observe that the skin has often entirely turned to a decided chocolate color, and tell me if they do not remind you forcibly of the Red-skins.

Do not forget that the Red-Skins, the Malays, the Annamites, the Chinese, the Coreans, and the Japanese have the same foot, and that this foot is worthy of attention. The Corean is more bony, the Malay thinner (he is the most debauched, drunken, impudent, wasteful, and quarrelsome, the oftenest sick and the quickest dead); but, among them all, the foot is the same. They make use of it with an astonishing degree of expertness in climbing and seizing, almost as much as do the Indians. But among the latter the foot is longer and narrower, and resembles closely the foot of the ape.

The Sikhs, with a height varying from 1.65 to 2 mètres, have very long and ungraceful feet. This foot of the yellow race is not flat, but low and full. I mean by that that the instep is not very prominent nor bony, and that underneath it does not form the bridge so characteristic of the Spaniards. The ankle is not much above the ground, but the foot is perfectly regular, straight, short, and of good size from before backwards; the ends of the toes almost square, never very callous, even among those who work barefooted, and it is joined to the leg by a very fine articulation. The hand and foot of the yellow race are much smaller than those of the Arabs. I have said nothing of the foot of the Chinese women, made small by mutilation (and I will treat the subject briefly), because this is the result of custom, and not at all characteristic of the race; only it is not true that this custom is dying out. There is still not one woman in the upper classes whose feet are in a natural condition. The custom varies according to the class and the locality. In the environs of Soutcheou all rich families cripple their female children in this manner.

At Shanghai, a day's journey from Soutcheou, this custom is not so general; at Canton still less. In certain country places all the female peasants have undergone this mutilation. It is a fact little known that even adults are often operated upon. At Hongkong I have seen a female servant sixteen years old submit to this torture in order to marry better. At this age, however, they only obtain a misshapen foot.

I have seen women who had been operated upon in infancy, whose feet were scarcely four inches long, walking well without a cane. I have tried to inform myself, and have learned that this detestable operation does not cause near as much mischief as it certainly would in Europe.

The lymphatic constitution of the race helps to remove fever and inflammation.

Nevertheless, I have often seen young girls, six, seven, and eight years of age, carried, being unable to stand, their little legs, bandaged tightly up to a point above the knee, hanging lifeless.

I am sorry to have to note that at Hongkong the English government closes its eyes to these horrors. It allows a great many others in order to please the Chinese.

To the medical fact just mentioned it may be useful to add others.

Firstly, the fearlessness with which the boldest mutilations are made, and the facility with which they heal in the yellow race, at least among the Chinese; then the different character of the cicatrizations, the action of the weakest medicines, the little havoc which small-pox makes among the natives in the extreme Orient, and its terrible effects among strangers. I shall call your attention, another time, to these facts, in connection with the subject of Chinese medicine.

I have said that among all individuals of the yellow race the pectoral muscles are little developed. I beg you to remember that these muscles pass around, under the arm, upon the back. These muscles sustain the breast of the female, and maintain it in its place. It is the weakness of these muscles, and their small development, which seem to me to explain the admirable roundness of the mammæ among all the yellow Oriental women, and its frightful flabbiness as soon as they are old. At these two periods of life, the bosom of the woman of the yellow race is very beautiful and afterwards extremely ugly. The same is true of the women of the Red-skins.

There are certain differences between the Chinese and Japanese women; thus, for instance, the latter have the mamma more developed, often very beautiful, and more permanently so than in the Chinese; the chest, too, is more open and vaulted; the shoulders and neck are stronger and more elegant, the limbs more vigorous, the whole body more plump. The Chinese women, in general, are slender, their shoulders flat and square, the chest sunken.

Perhaps I had better mention several anomalies and some facts in reference to cross-breeding. At Hongkong and at Amoy I have seen two perfect Albinoes: the skin of the whole body, the face included, was of the most characteristic pink. At Shanghai, a jeweller, son of a rich shopkeeper, born long before the arrival of the Europeans in this province, had a long cue of

straight, light-red hair of different shades. His complexion was pale and sallow, his eyes of a dark, reddish green.

Half-breeds are not wanting. It is not necessary to go farther than Hongkong. In that city I remarked four half-breed women, all daughters of native women and Englishmen. All were of a perfect brown color, but with that beautiful light-pale complexion so much admired in Quadroons. One of them had a long, prominent, European nose. The three others were taller than Chinese, stronger, fuller, and really beautiful, though their faces were a little too flat and round. Their eyes were much less drawn at the inner angle. Their hair seemed to be finer, always perfectly straight, but a little less badly distributed than among the pure Chinese women. I shall observe, in passing, that this distribution of the hair is much less defective among the Japanese. The Chinese women in full-dress conceal this defect pretty well with their different national coiffures. Those who desire to please Europeans dress their hair in bands which pass horizontally over the ear. The Japanese never, under any circumstances, change their local fashions; although the Chinese like to get our plain materials, such as stockings, shoes, and ladies' boots, and sometimes jewels. These modifications always begin among the demi-monde, and, strange to say, more so in China than in Japan.

Will the respectable women of the extreme Orient wear the same ornaments as the foolish virgins?

This has happened in other parts of the world. There are also blonde half-breeds. I have seen a boy from twelve to fourteen years of age, finely formed, with light, sandy hair, freckles, clear, rosy complexion, and light-brown eyes; and two lovely little girls, from three to five years of age, with nut-brown hair, blue eyes, white skin, and rosy complexion. It was at Hongkong. Both of these were children of the same Chinese woman, and a well-known Hollander, who did not trouble himself about them, quite contrary to the habit of his countrymen living in Java, who generally do what they can for their unfortunate illegitimate children. I hope that my lady readers will pardon me when I say that I bargained for these two little children for the express purpose of telling them all about them. The *mama* (a *mama* is not a mother, but one who speculates in adopted children) assured me that I could not buy them for a thousand dollars apiece; that she was not rich, but that she preferred to run the chance of their being looked upon as desirable prizes for mandarins of high station; for in this country it is only too true that paternal or maternal authority, even when acquired by adoption or purchase, is unlimited. They sell their little children like lambs or little pigs. On the other hand, I have been assured that the most destitute would not sell their children to Europeans. As to letting them out for all sorts of purposes, that is admitted to be a fact. Moreover, the popular belief is that, among the half-breeds, the males are quietly disposed of by sending them into the interior. This is done, they say, because they are too intelligent, too much inclined towards strangers, though valuable enough to be confiscated, so to speak, to the service of their own country.

At Macao the half-breeds can be counted by thousands. It can be said that the whole town is composed of half-breeds. The Chinese there are more slender than anywhere else. Many are tall, and of a rosy, copper complexion. Many have long and fine features. There is yellow blood in all the European families. These creoles with Portuguese names are almost all well formed, though small, and they often have beautiful features. The women are sometimes very pretty. In color they are less black, or rather more yellow, or more red than the European Portuguese, but they live in Chinese filth, and nourish themselves about as poorly as the Chinese. At the same time they dress in very elegant style, and are very clean about their persons. Their moral character and the tendencies of their intelligence leave much to be desired. While intelligent and very quick-witted, they are, nevertheless, very ignorant. They are the interpreters of all Southern China, although unable to read the Chinese language, which they affect as much as possible to ignore. Like all the half-breeds, the Portuguese of Macao make fine-looking and good soldiers.

I do not know whether travellers or physicians have ever spoken of the cross between the Europeans and Japanese. Perhaps there is something new to say on this point. I shall be brief. I have seen seven or eight half-breed children in Japan, nearly all of French fathers, and exceedingly beautiful. I happened to be acquainted with these fathers. They were, as regards size, form, and face, above the average, which, among Frenchmen, it may be well to say, is not very high. All these children are remarkable for strength, fulness of features, intelligence, and gentleness. All the mothers, it is true, are pretty Japanese women, and very white. All the children have a rosy complexion, chestnut-colored hair, and black eyes, notwithstanding the fact that the fathers have blue eyes. They also have the characteristic tense condition of the skin at the inner angle of the eye, though only to a slight degree. This tense condition, of which we have already spoken, is more general than the oblique eye, which is found among the Tartars.

Our observations upon the cross-breeding of European races on the one hand, and Chinese and Japanese on the other, will be, for a long time to come, only partial. In fact, for the present time, there is but one kind of union to be considered, whether legitimate or illegitimate, viz., that of European men with women of the yellow race. It is the same in the Philippine islands, at Java, and in India. It will be a long time before white women will have children by men of a race not white, except in very rare instances; whereas European men of to-day do not consider it wrong to procreate with women of any and every color.

Meanwhile it would be well, if possible, to study the relative power of each of the two sexes in cross-breeding. Useful facts on this subject could be collected in Japan only after the lapse of several years, because there are still only a few half-breeds there, and all are children. There are many reasons for hoping that they will occupy themselves more with the education of these poor little bastards in Japan than they do in China; but the chief one is that there are fewer English and Germans in Japan than in China. Let us hope that in a few years we will be able to make some serious observations on half-breeds, not only from a physical point of view, but also with regard to intellectual development and moral tendencies.

Even Macao cannot furnish us complete facts relating to this question, although there, more than in Brazil, Goa, Mozambique, or Senegal, the Portuguese have given proof of a remarkable absence of prejudice in the matter of sexual union. At Macao they are united to Chinese women, to Annamites, Malays, Japanese, and to the half-breed women of all the races. All the half-breeds are allied among themselves, and that, too, since the time of Camoens. But a Portuguese or half-breed woman is scarcely ever united to a man of pure yellow race. Macao can then be only useful to us for the purpose of judging what becomes of the race of half-breeds, and, if we study Macao in this respect,

it will be necessary to take account of the following facts: peopled originally by European bandits of the worst class, living from brigandage and fraud as much as from commerce, rotting for ages in the grossest ignorance and superstition, with a detestable hygiene, Macao was not an atmosphere favorable to the development of a new race.

In the half-breed population of Macao, more than anywhere else, you can convince yourself of the extreme persistence of this, which I eonsider a special characteristic of the yellow race, viz., the depression of the nose on a level with the iris.

Finally, it seems to me that it is not on the coasts of China, and still less in Japan, that we should expect to find in a pure state the north-west branch of the yellow race. In order to study it, we must go to the south-west portion of the Celestial Empire. The Japanese people seem to me to result from several crossings, which are very curious to analyze. And it would be necessary to go to the northern part of Nippon, at Yesó, and at Saghalien, in order to get a correct idea of this.

If I were to review the striking characteristics common to the whole yellow race, and which make it differ from all other races, I would find two characteristics besides complexion: 1st, The foot, somewhat triangular, the base of the triangle being at the anterior extremity; low, and smaller than all other feet. 2d, The nose flat—or, rather, absent—as far as to its inferior half.

Finally, permit me, in conclusion, to explain myself in a familiar manner. My formula is the result of long experience, and because it is not scientific may not find favor: an individual who can wear bow-glasses easily, does not belong to the pure yellow race.

WHERE LIES THE FAULT?

MR. EDITOR:—I have been much interested in some of the articles in your Life Insurance Department, and particularly those touching the medical examinations, or rather their relation to the physician, the agent, and the company; and a great deal of ink has been shed in fault-finding, in defining the position of the doctor, etc., etc., all summing up with the general statement that matters are very unsatisfactory. I do not propose to analyze the various statements, but beg simply to give a leaf from my own experience, as I have seen nothing from a similar standpoint. I am not a "regular examiner" for any company, but I fill gaps for three companies. That is, in one agency, when the doctor is out of town, I am sent for. In another, the doctor sends for me when a second physician's examination is demanded, as in applications for $10,000 and over. In another, the agent is my friend, and sends for me when the regular is not to be found. In each of these companies my credentials, with references, are on file at the home offices, and my examinations are received as usual. Under these circumstances I make from one to five examinations per month. From my standpoint, after four years' experience and observation, in addition to careful inquiry made previously, I am satisfied that the fault is in the system and not so much in the men; and, as long as human nature is as it is, what else can we expect? We hear shipowners say to their captains: "No cruelty on my ships." Yet the captain knows that if he does not make a quick trip, he will not be wanted; and so it's "lively there!"

So the company says to its agents: "We want you to be particular as to risks; but don't let any other company get ahead of you." And the agent says to the doctor: "Be particular; but if he doesn't pass, I'm out just so much." So when it comes down to the doctor, instead of his being the watchful sentinel of the company, he is bound to pass his man if he possibly can, for his friend, the agent, wants his commission; and especially does he try to pass him, if his own fee depends upon it, as in some companies.

Now as to making examinations: how few doctors have enough cases to make them experts! Then, as to the party to be examined, we know that the bulk of men are insured after a process of "boring;" in fact they are talked into it; and for fear "we'll lose him," the doctor is asked to visit the applicant at his place of business, or while he is at his dinner, or even, as in one of my cases, while the man was at work at the anvil.

Then, again, what a difference in examiners! I know of a case of a young man who was nervous over the idea of an examination, and so disturbed was he that the examiner declared he could not pass him, as he had heart-disease. Another examiner saw him, noticed the trouble, engaged him in conversation, calmed his fears, and found him to be a first-class risk.

A case occurred here a short time ago like this: a man wished to insure for $100,000—in five companies, $20,000 each. Four doctors called him a first-class risk; two other doctors found hypertrophy and valvular disease of the heart. In view of all the facts, it seems to me that three-quarters of the medical examinations are waste of labor, time, and money, and I am not sure but nine-tenths would be more accurate.

Nor do we have a much better showing, according to Dr. Buck's consumption table, in the cases recommended by gentlemen whose names stand high up in the list of honor and skill.

Now, what is the remedy? I have noticed that long life seems to be natural to some families, and *vice versa*. We often see a comparatively feeble man live, and we cannot see how, to a good old age; and a young man, who never was sick, die suddenly and at an early age, simply because one took care of himself and the other did not. I heard Dr. Winston, of the Mutual Life, New York, say that, after a careful examination of the medical history of that company from its organization, he found that deaths, occurring within the expectant time, bore a proportion to short-lived family history that was remarkable; and that in taking a risk he would give more for a long-lived family history than anything else. Dr. Buck's tables, so far as I can see, point the same way, and it certainly has been my observation through life.

Therefore, as far as I can see now, if I were going to organize a company of my own, I would abolish entirely the medical department, and the sole basis of insurance should be age and family longevity.

The regular rates should be according to age, as per tables of expectancy of life. Then the risks would be divided into classes based on family longevity; the standard to be settled according to the number of generations reviewed and the age of each person. In this way a few or many classes could be made, and a certain percentage above or below the regular rate, according to the class, added or subtracted. This would certainly simplify matters. Of course, there would be minor rules to be made, such as: the applicant at the time to be in good health, that is, his ordinary health, so far as he knows; then the longevity of his ancestry, so far as he knows it, is to determine his place in the first, second, or third class, as the case may be. I am confident that in this way many a young man, whom any doctor would call number one, would

be put down number two or three, while many a man who could not get insured on account of heart disease—though he might carry it twenty or thirty years—would be classified as number two, or even number one, with great advantage to the company. X.

San Francisco, Jan. 28th, 1874.

Correspondence.

AN HONEST AGENT NECESSARY.

To the Editor of The Medical Record.

Sir:—Having been a medical examiner for many life insurance companies for the last twenty-five years, I have very naturally been much interested in the perusal of the various articles written for that department in your valuable journal.

As yet, in my judgment, no suggestion which has been made comes nearer to the desired object than the one in the number for Dec. 15, 1873, to wit: "Secure the best elements of the medical profession." I would not confine these "elements" to those of the profession who may be possessed of the most skill only, but I would require them also to be *honest in every particular*.

The greatest difficulty in many instances lies in the manner of their appointment. The present mode of many companies, I think, falls far short of the true course. For instance, an agent, a stranger in the community, comes in town, and in a short time begins to make inquiries of whomsoever he may meet, like the following: "Who is your best doctor?" "Does he do the most business?" etc. As a matter of course, the person of whom he seeks information invariably recommends the physician whom he employs, be he a homœopathist, Thompsonian, or "root doctor."

Should the agent happen to tilt against two or three individuals who speak favorably of the same medical man, in four out of five such cases said medical gentleman will be appointed regardless of his qualifications.

Another instance: I well remember, a few years ago, an individual in this vicinity who took the agency of one of the best companies in Connecticut. He being a strong believer in the doctrine of similia similibus curantur, at once appointed a disciple of that theory. The agent, at the time he caused the appointment to be made, well knew that the *doctor* was not a graduate, had no knowledge of anatomy, and knew no more of auscultation than an old Morgan horse which I had driven for ten years. In fact, he belonged to that number who were called "five-weeks' doctors."

Now, if it is necessary to secure the best "elements of the medical profession" for examiners, it is equally important to secure "the best elements" of laymen to act as agents. When these two objects are attained, I think all will be accomplished that can be. Until the latter course is adopted, an occurrence like the following is quite likely to happen:

An agent goes into new territory to work. He first calls upon *all* the medical men in the vicinity, and seeks to ascertain, so far as is possible, all he can about what might be termed their flexibility of character. Before an appointment is made, he announces that his company does not object to his being present when the examination is made. Should there be no objection to that course raised by the physician, he will then say that he (the agent) "will not ask the medical man to rely solely upon the fee for his services, but if business is good he often makes the examiner a nice present when he gets through." Such instances I have known many times in my experience, and, in the case of two agents, far more astounding propositions were made. Another assertion of the writer of the article spoken of is incontrovertibly true, to wit: "We do not believe, however, that a blank can be invented which will throw light upon the question of an examiner's truthfulness and willingness to do his full duty toward the company employing him."

One other thing touching the honesty or carelessness of the agent just occurs to me, and that is the question which occurs in the blank to be filled by the agent, the answers to be made by the applicant. The question is, "Have you ever had any of the following diseases?" Here follow their names. In three instances, during the past season, when making the examinations, I have found a negative answer, when the truth was to the contrary. So far as my experience goes, the application, "filled up," is of but little use to the examiner where he does his duty faithfully.

One or two other points, and I will have done.

In relation to the suggestion of some one of your correspondents, that a "private note" from the medical examiner to the company would be very proper, where the examiner wished to conceal from the applicant (he and the examiner being intimate friends) the real source of his rejection. I think such a course is objectionable, for this reason, that it is upon the principle that if the applicant is rejected it is *always* owing to the medical examiner's refusing to recommend him, whereas his rejection often comes from the home office, even after the country examiner has (and sometimes very properly, to my knowledge) recommended "that a policy be granted." In two instances, in particular, do I remember this to have occurred, and the same company, within twelve months, very justly accepted the same risks, their physical condition being nowise different than when the applications were first made. They are now, and were then (a few years ago), in perfect health. Country medical examiners are not always the ignorant ones in the profession. One word as to the examination of the urine. I think it highly important that the specific gravity should be ascertained in the majority of cases, as well as that the test for albumen should be made.

Please excuse the length of this paper, as I could not well make it shorter, and don't now feel that I have arrived at a satisfactory stopping-place.

D. Colvin.

Clyde, Wayne Co., N. Y., Jan. 26, 1874.

Miscellaneous.

Five Generations, all Living.—Dr. T. S. Lambert has succeeded in having a photograph taken of a most remarkable group of persons. At one end of the picture is seen an old lady, 94 years of age, seated beside her daughter, who must be nearly 70 years old. The grand-daughter, the great-grand-daughter, and, finally, two great-great-grand-children complete the group. The photograph is unusually sharp in all its details, and the family resemblance is quite striking in the faces of all the female members of the group.

A New Work on Medical Examinations.—Dr. Edward H. Sieveking, Fellow of the Royal College of Physicians, London, has just published a most instructive little book for medical examiners, under the title of "The Medical Adviser in Life Insurance" (J. & A. Churchill, New Burlington Street, London, 1874.)

Original Communications.

PERINEAL LITHOTRIPSY.

By ERNST KRACKOWIZER, M.D.

NEW YORK.

(A paper read before the New York State Medical Society, Feb. 4, 1874.

When listening to the paper on Perineal Lithotripsy, read by Dr. J. W. S. Gouley before the State Medical Society last year, I resolved to test his method in the first case of vesical stone which I might meet. It differs, and is superior to median lithotomy, so-called, mainly for two reasons: 1st, in that it dilates the wound track, the prostatic portion, and the neck of the bladder, in a more gentle and gradual manner than it is possible to do with the finger; and 2d, in that it renounces beforehand the attempt of extracting a stone beyond the diameter of three-fourths of an inch, considering that the track established by median lithotomy cannot be stretched safely beyond the diameter of one inch without exposing the patient to the immediate and subsequent danger of tearing and contusing the parts which constitute the way for extracting the stone.

I have to report *three cases*, in all of which I had the advice and assistance of Dr. Gouley, and in which I used the instruments kindly loaned by him, adhering strictly to the rules laid down by Dolbeau, with the exception that the incision made in the membranous portion was made by at once plunging the knife boldly down to the groove of the staff, and making the incision larger than Dolbeau does himself.

First Case.—G. M., 64 years of age, watchmaker, had rational symptoms of stone in the bladder for about eight years. The stone was first detected by Dr. George M. Schweig, of New York, who called me in consultation in April, 1873. The patient was chloroformed, and the bladder extended by an injection of warm water; a lithotrite was introduced, and the stone was grasped several times with a view to make out its size. The largest diameter showed 45 mm.; the smallest, 40 mm., corresponding to very nearly $1\frac{7}{8}$ and $1\frac{5}{8}$ inches. When the stone had been grasped for the last time, the beak of the instrument was turned toward the fundus of the bladder, and, while elevating the handle of the instrument, pushed strongly backward and downward, so that the finger introduced into the rectum could make out the contour of the stone with absolute exactitude. This exploration confirmed what the measuring by the lithotrite had already taught, namely, the presence of an almost round, tolerably smooth stone.

The prostate gland was found moderately enlarged. The detritus adhering to the branches of the lithotrite left no doubt that, at least as far as the surface was concerned, it was a phosphatic calculus. Although the patient was well nourished, and although the local functional disturbance was not of an excessive kind, yet he was feeble, and looked pale; so that it was thought advisable to subject him to a tonic regimen for a couple of weeks before the operation should be made. The operation occurred May 20th, 1873. After dilating the track in the manner described by Dr. Gouley in his paper, the stone was reduced to fragments, partly by Dolbeau's and partly by Gouley's lithoclasts, and these fragments and the débris extracted. To do this it was necessary to introduce the instruments very often. The hemorrhage was insignificant. The fragments and débris weighed 1,324 grs. For an hour or two after the operation the patient felt chilly. Ten grains of quinine were administered at once, and a suppository of opium was given. With this exception and a few five-grain doses of quinia no medication was used. There was hardly any febrile movement, the pulse never exceeding 100°. nor the temperature more than 99° and a fraction, The patient had control over the sphincter of the bladder during the first twenty-four hours after the operation, although the nisus occurred very frequently. These intervals between micturitions became longer and longer, until at the end of five days he could hold the urine from four to five hours. Already the next day after the operation, part of the urine passed through the meatus, and from the fifth day by far the largest part of it was discharged through the natural channel, only a few drops oozing through the wound during the act of passing water.

On the 11th day after the operation the patient was permitted to rise and move around the room. The 14th day after the operation I found the old man sitting at his work-bench. There was only some superficial suppuration at the wound, and ten days later it was completely closed. Dr. Schweig, who was most assiduous in carrying on the after-treatment, and who took very full memoranda of the case, injected the bladder June 6th,—seventeen days after the operation, and sounded it. Not a trace of débris could be detected with the sound, nor did any come away while the patient voided the bladder from the injected water. The sexual power, which had been quite dormant during his sufferings, returned after a few months, and in every other respect the health of Mr. M. has been excellent to this very day.

Second Case.—A rachitic boy, A. P., three years of age, had wetted his bed during sleep as long as he had lived. Had suffered from acute rheumatism not quite one year ago, which left him with insufficiency of the mitral valve. Rational symptoms of stone in the bladder developed soon after, but were judged to be merely an aggravation of the enuresis, which in turn was supposed by one physician to be caused by a too narrow prepuce. So he incised it, without affording any relief. Dr. L. Conrad saw the child, and on examination with the sound detected a stone in the bladder. He invited me to see the child, and by repeating the examination I corroborated his diagnosis. An examination per rectum revealed the size of the stone, in all diameters, to be about three-fourths of an inch. June 3, 1873, Dolbeau's operation was performed. The dilatation was made with Dolbeau's dilator, very slowly and cautiously, but finally the instrument was expanded to its full limit. Gouley's forceps for fragmentation of stone was used, by which the stone was broken up in several small fragments and a powder, which, partly with this forceps, and partly with a slender stone forceps, were removed. Bleeding very little. The stone was a phosphatic one, its weight being about two drachms. There was no reaction. In fact, the child had, since several months, not had so much uninterrupted sleep as the night following the operation. The passage of the urine through the whole length of the urethra did not occur before the fourth day after the operation, and it was fully two weeks before the whole urine came through the natural channel. At what time precisely after the operation the child gained control over the sphincter of the bladder, I did not succeed in making out; partly through inattention of the parents, partly because the habit of wetting himself complicated the case. When I last heard of the child—about three months ago—it was free from all urinary trouble, but the enuresis persisted as much as ever.

Some time ago Dr. Gouley informed me that he

thought the mode of dilating the track for the extraction of vesical stone could be improved; that for Dolbeau's dilator a better instrument could be substituted; that he was experimenting to perfect such a substitute. I show it here. It consists of a gum-elastic catheter, around which, at some distance from its vesical as well as other extremity, a loose india-rubber bag is fixed, which can be filled with water through a small feeding-tube attached to its lower end. I promised that I would try it on the first case of vesical calculus that came under my care.

Soon after, my attention was called to Dr. W. Molesworth's so-called climax dilator, which, without doubt, is superior to Gouley's instrument, because the former's tubes, requisite to dilate the track in perineal lithotripsy, can be very easily introduced by the guidance of the staff in the bladder; whereas in Gouley's, the collapsed bag, forming, as it were, two lateral wings, which cannot be easily managed, obstructs the progress of the instrument in the track. Besides, the walls of the bag are too delicate, and even if expanded by injected water, would hardly have force enough to overcome the resistance of the prostate and the sphincter vesicæ, which would rather constrict the dilator, giving it an hour-glass shape.

On the contrary, in Molesworth's dilator the walls of the india-rubber tube are made very strong, and it requires considerable force to overcome its resistance, and to fill it by degrees. The powerful condition of its walls is best seen by opening the stopcock after the distention has been completed, the water being thrown back with considerable force. A case for trying the improved modification soon occurred.

THIRD CASE.—P. W., some forty years of age, was laboring from chronic enteritis and colliquative diarrhœa for seven or eight years. He entered the German Hospital in the city of New York during the summer of 1873 in a state of extreme exhaustion, having hardly any command of his stools, so that he had to pass sometimes many hours on the bed-pan, he not knowing when a passage was coming from him, or, if knowing, not being able to leave the bed to check its running from him. By careful nursing and treatment he improved by degrees so much that he could sit up again, and his appetite returned somewhat. The number of his stools was reduced to four or five in twenty-four hours, and they gained somewhat in consistence, although never assuming a solid condition. About October, 1873, he complained of a more frequent desire to pass urine; that the act was painful; and that the urinary tenesmus continued some time afterward. These troubles increasing, the house-physician explored his bladder with the sound, and detected the presence of a stone. The patient was immediately transferred to the surgical room, in which I happened to be on duty. After a few days' rest I repeated the examination, and found the house-physician's diagnosis correct. The diameter of the stone, as measured with the lithotrite, was 45 mm., about 1¾ inches. On touching it per rectum in the manner described in the first case, it was found that the stone was quite round, all its diameters being equal. The next few days of rest were devoted to a careful and repeated examination of the urine. Besides some mucus, it contained albumen; and in each specimen, looked at through the microscope, a large number of fibrinous casts were seen, showing that not merely the excretory portion, but even the secretory portion of the urinary organs was gravely diseased.

January 18th, 1874, I proceeded to subject this most unpromising case to the operation of perineal lithotripsy. Patient was etherized, and after the opening of the membranous portion of the urethra an attempt was made to introduce Gouley's dilator. I substituted Molesworth's, taking tube No. 2, which allows an expansion of one inch diameter. It was withdrawn while still dilated to its full extent, and it was beautiful to see, as it emerged by degrees from the perineal wound, how inconsiderably wider the parts liberated from its constriction bulged out than the one still retained. The finger could at once be introduced through the track into the bladder. Some little delay occurred in getting hold of the stone, but after it once was grasped it broke up with the greatest ease in a few small fragments and a large amount of dust, all of which were removed by repeated introductions of a slender, common stone-forceps. The stone was a uric calculus, and weighed nearly half an ounce. There was hardly any bleeding. My fear that in an individual so utterly broken down by chronic diarrhœa, with kidneys so much disorganized, the reaction might usher in a suppression of urinary secretion and uræmia, was happily not realized. On the contrary, he bore the operation uncommonly well. The same evening, after the operation, he was conscious that he had some control over his bladder, although he was obliged to expel small quantities of urine every half hour. The next day these intervals lengthened. On the third day a few drops of urine appeared in the meatus, and forty-two hours after the operation he could hold his water for five hours. On this plane he remained for several days, but then his diarrhœa returned with the old force again, and the liquid stools pass from him many times involuntarily. He is therefore many times not able to say whether the urine too passes involuntarily with the stools or not. With all that, the wound has a good aspect, and two days before I came away it looked as if the diarrhœa had been brought again somewhat under control, and he was again able to hold the urine for an hour or so at his will. There is some prospect then that the wound may close, and the urine be discharged through its natural channel, although sooner or later he must succumb to the trouble from which he has suffered for years.*

A NEW METHOD FOR THE TRANSFUSION OF BLOOD.

BY JOSEPH W. HOWE, M.D.,

VISITING SURGEON TO CHARITY HOSPITAL, N. Y.

THE operation for transfusion has varied but little during the past five hundred years. It was brought fully into public notice during the latter part of the fifteenth century, by the physician of Pope Innocent VIII., who sacrificed three young boys in performing the operation on his master. The transfusion was made with instruments resembling those employed at the present day. Since that period Silarius, Wren, Denys, Riva, Manfred, Playfair, Sqlon, Jacobi, and many others have operated in much the same manner with varying success.

The ordinary method of operating may be briefly stated thus:—A healthy adult having been selected, and his arm bandaged above the elbow, an incision is made in the median cephalic vein, and from four to six ounces of blood abstracted. This is received into

* The patient died from exhaustion, February 12, 1874 (eight days after the reading of this paper). The post-mortem showed the wound of the operation healed with the exception of a track, passing from the membranous portion of the urethra to the surface of the perinæum, admitting a common probe.

a warm bowl prepared for the purpose. The fibrin is then separated from the blood by stirring it briskly or "whipping" it with a glass rod. A vein is opened in the patient's arm, and a canula introduced which is retained by means of a ligature. The transfusion syringe is filled with the defibrinated blood, and its contents injected through the canula into the vein.

Many varieties of syringes or aspirators have been used for transfusion, but the essential parts of the process remain unchanged, and are still open to grave objections.

1st. The blood is exposed for a length of time to atmospheric influences, and therefore liable to receive deleterious ingredients. This is especially liable to occur when the operation is made in the wards of a hospital.

2d. In the process of "defibrination" a quantity of red globules must necessarily be entangled in the meshes of the fibrin, and removed with it. And as the nutritive and stimulating properties of the blood depend mainly on the presence of these globules, a diminution in their amount is followed by a corresponding deterioration.

3d. In cases where the hemorrhage has been great, and the stimulus of healthy blood needed at once, the time spent in defibrinating may render the transfusion a failure.

4th. The wounds in the veins being comparatively large, there is more or less danger of phlebitis or thrombosis.

For some time past I have been experimenting with Dieulafoy's aspirator; and by means of appropriate needles, tubes, and stopcocks, have succeeded in simplifying the method of transfusion, and obviating the objections previously enumerated.

The hollow needles best suited for the purpose are three inches in length, with a diameter of 2½ millimetres. The open space at the end is a quarter of an inch in length; and the point is curved forwards so that on inserting it into the vein its point will not catch in the opposite wall of the vessel. The tubes may be made of rubber or gum, and are five inches in length. The canal of the tube is one-half the size of the ordinary tubing belonging to the aspirator. The stopcock of the aspirator is regulated by the addition of a pivot on the inside, so that the surgeon can ascertain positively when the communication between the aspirator and tube is open or shut. The size of the needles is also required. The aspirator, with the transfusion needles, canulas, and tubing, were manufactured for me by Mr. W. F. Ford, of Caswell, Hazard & Co., and are admirably adapted for the purpose.

When ready for use, the aspirator is placed in a basin of warm water and allowed to remain there from the beginning to the termination of the operation.

A healthy adult with good-sized veins is to be selected, and a broad roller bandage tied around the arm above the elbow, care being taken not to make the bandage so tight as to prevent the circulation through the arteries. The forearm is then partially flexed, and the hand made to grasp tightly a round piece of wood or other hard substance. By this forcible contraction of the muscles the blood is driven into the superficial veins, and the bandage prevented from pressing on the brachial artery. When the vessels are distended the needle is inserted obliquely from above downwards into the median basilic vein. The operator grasps the rubber tube between the thumb and forefinger, turns the stop cock of the aspirator, and allows the blood to rush on and fill up the cylinder. By compressing the tube occasionally the blood will not be drawn out of the vein more quickly than it enters.

In the mean time, a vein in the patient's arm should be exposed. An assistant grasps the arm above the elbow, and presses on the basilic and cephalic veins. These vessels are thus made sufficiently prominent to guide the operator in his incision. An incision is next made through the integument and fascia, an inch above the elbow-joint, and on the inner side of the cephalic vein. The distended vessel will then bulge into the opening. The air is expelled from the tube on the opposite side of the aspirator, by forcing a little blood through it, or by sucking out the air and afterwards compressing the tube between the thumb and forefinger so as to prevent its re-entrance. The needle is then inserted into the vein and the healthy blood thrown from the aspirator into the circulation of the exsanguinated patient.

When the vein is empty, or so small as to prevent the introduction of the needle, a canula may be employed. To do this the vein must be isolated for about an inch, and two ligatures passed around it. The ends of the lower ligature are crossed over the vein, brought down below the arm, and tied. This will prevent bleeding when the vein is opened. The wall of the vein is next pinched up with a forceps, and an opening made through it with a sharp scissors. The canula is inserted, the upper ligature tied over it to keep it in place, and the blood injected as before.

Two weeks since I operated by this method on a patient in Charity Hospital, who had lost large quantities of blood from epistaxis. The history of the case as taken by Dr. M'Bride, house-surgeon, is as follows:—

Mary Gibson, age 40; occupation, housekeeper; was admitted to Charity Hospital on Dec. 29, 1873. She gives no history of hereditary disease. Six years ago a tumor was taken from her uterus, in Bellevue. Menses ceased in June, 1873. In October last had severe epistaxis for the first time, and lost (she thinks) about two pints of blood. One month from that date she lost a similar amount. Did not bleed again until the day before her admission, when she had another severe attack. On admission the bleeding had ceased, but she was extremely pallid and feeble. The next day the hemorrhage came on profusely, but was controlled by the persulphate of iron. In three days it returned again, and was checked in the same way. On Jan. 6th, she lost a large quantity of blood during the night, and the posterior and anterior nares were plugged to stop the flow.

I saw the woman on Jan. 7th. She was extremely prostrated, nervous, and incoherent. Her pulse was very weak, rapid, and irregular, and at times almost imperceptible. The skin was cold and perspiring, pupils widely dilated, and voice husky. I proceeded at once to perform transfusion, assisted by Drs. John H. Ripley and Leroy M. Yale, visiting surgeons to the hospital. I abstracted, by means of the aspirator, four ounces of blood from the median basilic vein of a healthy man. Two days before, I had taken eight ounces from the same individual. I made the second opening in the vein a quarter of an inch below the first. The latter had healed a few hours after the operation, and at the second transfusion was scarcely perceptible.

The blood thus obtained was injected into the cephalic vein of the patient. In a few moments she expressed herself as feeling better. There was an immediate and marked improvement in the volume and force of the pulse. This was so perceptible as to be noticed by all present, and prevented me from transferring any more blood. She was then ordered thirty drops of tinct. opii, and a tablespoonful of whiskey. The next morning I found her pulse still improving,

and her general condition excellent. She spoke in a clear voice, and stated that she could think clearly, and remember all her sickness, which she could not do before the operation.

The hemorrhage has not since recurred, and the patient has regained her strength.

I will not undertake to say that this woman would have died if the transfusion had not been made. There is, however, no doubt that the addition of four ounces of blood to her depleted system gave her the stimulus needed, produced an almost instantaneous change for the better in her general condition, and hastened her recovery.

The advantages of the operation I have described may be summed up in a few words:

1st. It takes less time than any other.

2d. The blood is transferred without exposing it to the air.

3d. The nutritive elements of the blood are not diminished.

4th. As the fluid is drawn into a vacuum, there is no danger of coagula forming. (I have allowed blood to remain in a cold aspirator twenty minutes, and at the end of that time found it perfectly liquid.)

5th. The opening in the vein being a simple needle-puncture, there is less danger of phlebitis or thrombosis.

Like all other operations of this character, care and delicate manipulation are required.

The needles and tubes through which the blood is carried to the aspirator must be of the size I have described. On the opposite side, the tube of exit and canula should be larger. The bandage should be allowed to remain on the arm from three to five minutes before the vein is opened, in order to insure complete distention of the superficial vessels. The needle may be inserted into the vein about an inch.

If the vein is small, or the circulation sluggish, compression of the tube by the fingers of the operator will diminish the amount of blood coming from the vein, so that it will not collapse. In all cases it may be well to observe this precaution.

When the proper transfusion needles or tubes are not at hand, the old operation may be performed, and the aspirator employed instead of the ordinary transfusion syringe.

NEW YORK, Jan. 24.

CENTRAL GALVANIZATION COMPARED WITH OTHER METHODS OF USING ELECTRICITY.

BY GEORGE M. BEARD, M.D.,
NEW YORK.

I HAVE applied the term *central galvanization* to a distinct method of using the galvanic current in medicine. In this method one pole (usually the negative) is placed at the epigastrium, while the other is passed over the forehead and top of the head, by the inner borders of the sterno-cleido-mastoid muscles, from the mastoid fossa to the sternum, at the nape of the neck, and down the entire length of the spine.*

The object in this method is to bring the whole central nervous system—the brain, sympathetic, and spinal cord—as well as the pneumogastric nerve, under the influence of the current.

The method of central galvanization is based on these two assumptions, both of which seem to me justifiable.

1. That in a very large number of diseases, and especially of the so-called functional diseases, the pathology is not exclusively confined to any region of the brain or sympathetic, or spinal cord, but the whole central nervous system is invaded by a condition of exhaustion and irritability. I believe this to be true not only of hysteria, chorea, and of many affections allied to them, but of certain states of neuralgia, and a number of diseases of the skin. It is possible, furthermore, that some diseases that are not now regarded as in any respect of a nervous character may in the future be shown to depend so closely on the nervous system that they can be most successfully treated, not through their varying and local manifestations, but through the brain, spinal cord, and sympathetic. That certain diseases, not primarily nervous, do so affect the nervous system that they need to be treated, in part at least, by remedies that act on the nerves, will be conceded, I suppose, without question.

2. That the nutrition of the central nervous system will be improved by passing through it a mild galvanic current.

That in the great majority of cases of so-called functional nervous disease, and in many of the cases of special structural lesions, nerve-tonics are indicated, will be questioned by no one. It is also coming to be pretty generally admitted that electricity is something more than a stimulant—that it is a *tonic* with a powerful *sedative* influence. Still further, it is admitted that the sedative and tonic effects of electricity can be obtained by passing the current, with little or no interruption, through any part, the nutrition of which needs to be improved.*

The positive pole (anode) is applied over the head, neck, and spine, because it is less irritating than the negative, and tends to diminish irritability. The majority of the cases for which central galvanization is used are in a condition of abnormal irritability, and need the calming effects of analectrotonos rather than the irritating effects of catalectrotonos. To this rule there are individual exceptions: there are cases that appear to be benefited more by the negative than the positive pole.

The negative pole (cathode) is placed at the epigastrium, because the epigastrium is a good, indifferent point, that will bear well the irritating effect of catalectrotonos. In order to avoid over-irritating the stomach and the pneumogastric nerve, it is well, in very sensitive patients, and when long applications are used, to change the position of the negative electrode by moving it up and down between the sternum and abdomen.

The positive and negative modifications that take place at the breaking of the galvanic current, in the region of the anode and the cathode, probably complicate somewhat the effects of treatment—are, indeed, factors of some importance in producing the effects, and not unlikely explain, in part, the disagreeable results that come from too frequently interrupting the current when treating nerve-centres.

I claim for central galvanization a distinct and separate position among the different methods of using electricity in medicine. The application of the galvanic current to the head, the neck, and the spine, which have been variously used by electro-therapeutists since the time of Remak, are simply forms of local-

* This method was first described by me in THE MEDICAL RECORD, December 15, 1871, and subsequently more in detail in the *New York Medical Journal*, October, 1872.

* For demonstrations of the effects of the faradic current on nutrition, see account of my experiments on a litter of puppies, recorded in my pamphlet on "Certain Queries in Electro-physiology and Electro-therapeutics," reprinted from *Psychological Journal*.

ized electrization, since the object aimed at in all of them is to localize the current, so far as possible, in the brain, or some portion of it, in the cervical ganglia of the sympathetic, or in the spinal cord. Then, again, in all these forms of localized galvanization of the nerve-centres, the poles are placed near each other over the part to be affected, and the peculiar action of both poles is felt, so far as is possible by external application, in the organ that is treated.

In galvanizing the head, for example, the poles are applied behind the ears, or in front of them, or one is placed on the forehead, and the other on the occiput or at the nape of the neck. In galvanizing the cervical ganglia of the sympathetic, one pole is placed on the auricula-maxillary fossa, or along the inner border of *the sterno-cleido-mastoid* muscle, while the other is applied at the back of the neck. In galvanizing the spine, one pole is placed at the upper or lower part, while the other is passed up and down the entire length, or kept in one place, or both may be moved up and down the entire length, or confined to any portion as is desired.

But in central galvanization the electrodes are so placed that the whole central nervous system is brought under the influence of the positive pole of the galvanic current at one sitting, and without any important change of position of the negative pole. Besides, the central nervous system, the pneumogastric, and the stomach itself are also affected; in a word, the great centres of life, of health, and of disease.

Comparing central galvanization with general faradization, we find most important differences. In the one, only the galvanic; in the other, only the faradic current is used.

In general faradization the application is made not only over the central nervous system, but over the entire trunk, and especial attention is given to the muscles of the abdomen and extremities. In central galvanization the chief aim is to affect the central *nervous* system; in general faradization the chief aim is to affect the *muscular* system, although the nervous system, central and peripheral, is affected both directly and reflexly.

Comparing central galvanization with other methods of using electricity, by the *effects*, we find differences of a most marked and interesting character exist. The ordinary methods of galvanizing the cervical sympathethic, the brain, or the spine, do not, either singly or in combination, produce the powerful tonic results that are frequently obtained by central galvanization. Sedative and tonic effects are unquestionably produced by these local methods, but they are frequently inferior in quality and degree to those derived from central galvanization when properly administered. This conclusion is derived from actual trial and observation of cases. Neither the temporary nor the permanent effects of localized galvanization of the brain, of the cervical sympathetic and pneumogastric, or of the spine, are as satisfactory in many cases, even when they are successively used at the same sitting and with the same time and strength of current, as central galvanization.

Still further, experience teaches that the method of central galvanization, in its completeness, is more serviceable than partial or incomplete applications of it. Placing the negative pole on the epigastrium, and the other on the spine, will not accomplish the full effects of central galvanization, although, so far as it goes, it is a good method and produces sedative and tonic effects. To confine the attention to the head and neck alone, also, is not sufficient.

Comparing the effects of central galvanization with those of general faradization, I find that both are powerful tonics, and are adapted for conditions of debility, by whatever names they may be known. For some cases, and particularly for cases associated with great *muscular* debility, general faradization is more effective than central galvanization. On the other hand, in cases where simply *exhaustion* of the nerve-centres is the leading condition—as hysteria, chorea, and so forth—central galvanization is oftentimes far superior to general faradization.

Some of the best results that I have yet seen have been secured by combining or by alternating the two methods.

Sometimes, after general faradization has done all that it is capable of, central galvanization, rightly used, helps to lift the patient still higher. In cases where I am not experimenting, and seek only the best good of the patient in the shortest time possible, I use in succession, or alternation, and with changes and modifications, all the principal methods—local galvanization of the brain, of the cervical sympathetic, and spine, general faradization and central galvanization.

This course is found to be oftentimes justified by the results.

The improvement is more positive and more permanent than when a single method is used exclusively.

Some cases I treat one week by general faradization, the next week by central galvanization; sometimes I alternate the methods from day to day.

There are, however, cases not a few, where all forms of faradization, and where the local galvanization and the nerve-centres irritate rather than benefit, but in which, under the method of central galvanization, there is sure and constant improvement. I have demonstrated this not only in hysteria and hysterical diseases, but in some forms of eczema and prurigo.*

Dr. Althaus, of London, in the third edition of his most excellent work on Medical Electricity, after describing this method of mine in detail, remarks that he had never carried out the method in its entirety, but that he had used, experimentally, applications to the head and neck with the anode, and to the epigastrium with the cathode. He states that unpleasant results have followed these experiments, that disagreeable cerebral symptoms were produced by it during the application, and which sometimes continued for twenty-four hours or more afterwards.

"The patients had a general sensation of *malaise* and nervousness, headache, and a feeling of giddiness and confusion."

Dr. Althaus further states that he has used the "application of the anode to the cervical and lumbar spine, and of the cathode to the pit of the stomach with advantage."

Nothing is easier than to produce these unpleasant results in susceptible patients by any method of galvanizing the brain and neck, provided strong currents are used, or interruptions are allowed, or the applications are prolonged. The same effects may follow general faradization and galvanization.

In beginning to treat a patient by central galvanization, we should use very mild, scarcely perceptible currents, particularly around the head and neck, and even on the cervical spine, and great pains should be taken to avoid breaking the current, and the application should be of only a few moments' duration. Taking these precautions has now become with me a mere matter of routine, and I am every day accustomed to treat the most sensitive and delicate patients —cases of hysteria, nervous exhaustion, hypochon-

* See MEDICAL RECORD of Dec. 15, 1873.

driasis, and allied affections—cases which are sufficiently familiar to all American physicians, and with sedative and tonic effects that are not obtainable by other methods.

Whenever any of the disagreeable effects spoken of by Dr. Althaus occur, I always give the patient a longer interval, and moderate the applications until only good, unmixed with evil effects appear.

The American constitution is more susceptible to electricity than the English or the German, and if our nervously exhausted, hysterical women can bear and be profited by central galvanization, surely the women of England and Germany might be treated by the same method, even when used with less caution.

I have frequently treated by this method delicate women who are too feeble to walk or stand, or even to sit up, and who, therefore, must be treated in bed, and even in such cases, the disagreeable effects only occur now and then, and no oftener than they occur when other methods of electrization are employed in the same kind of cases; indeed, not so frequently as they follow general faradization or local galvanization of the brain.

I have room to give but one illustrative case. This case, however, is typical of a class of symptoms that, in women especially, are frequently very distressing, and very rebellious not only against ordinary medication, but also against faradization, general or local.

Hysteria of one year's standing in a married lady, following parturition; strange and indefinite sensations in the legs; tickling, crawling, pricking, waving, beating, pounding, heaving, rolling sensations over head and body; imaginary swelling of the body; fits of weeping and great despondency. Rapid and decided improvement under central galvanization with strong currents, after failure of general faradization. Cod-liver oil emulsion and counter-irritation used at the same time.

Mrs. B., a married lady with two children, was referred to me November 5, 1872.

The patient, though a lady of unusual intelligence and great strength of will, had for nearly a year been a victim to many of the worst symptoms of hysteria. The symptoms appeared ten days after the birth of her second child; up to that time her health had been almost perfect. She came from a family in whom there was some tendency to consumption, and she had lost two sisters by that disease. A short time before the birth of her second child, she had fallen down stairs and had struck on the back of her head. The query arose, whether that might not have had something to do with her disease. The symptoms came on in the night, and quite suddenly. She became excessively nervous, almost wild, and the physician was sent for and succeeded in calming her; then followed a long catalogue of woes. On the top of the head was a constant sensation of shaking or agitation, or thrilling, as she described it, and heaving, rolling, beating, waving, pounding sensations were felt in the head and over the body. There had been many attacks of weeping; at all times, though naturally hopeful, she was cast down, and imagined she did not love as she should one of her children. The general nutrition, as usual in such cases, was well maintained.

The patient had tried, with great thoroughness, general faradization but without substantial service.

I used on her mainly *central galvanization*, combined with the use of cod-liver-oil emulsion, and mild counter-irritation over the tender vertebræ.

The patient, with all her nervousness, bore the *galvanic current in enormous doses:* it seemed to be impossible to injure her by over-electrization. I soon found that the stronger the currents, and the longer the applications, the greater the benefit. Even through the brain strong currents, now and then interrupted, did no harm. She soon began to improve, and continued to improve not only during the three months of treatment, but subsequently, and there was in this improvement a considerable degree of permanency.

In the above case there were facts of great interest. First, the extraordinary tolerance in a highly nervous patient of the galvanic current; and secondly, the supreme advantage of central galvanization over general faradization in severe functional diseases of the central nervous system.

A condition where the superiority of central galvanization seems most apparent, is that which so often accompanies the "change of life." Many of the symptoms of this familiar nervous state are similar to those recorded in the case above detailed. Such cases I have continually under treatment, but to record them would make this article longer than I had intended. In all, or nearly all of these cases, I use central galvanization in preference to other methods.

THE TUNING-FORK

AS A MEANS FOR

DIAGNOSING PERFORATION OF THE MEMBRANA TYMPANI.

By THOS. F. RUMBOLD, M.D.,

ST. LOUIS, MO.

During the month of April, 1869, I suffered rupture of the tympanic membrane by a severe explosion that occurred in making oxygen gas with the sulphuret of antimony, instead of peroxide of manganese, by mistake.

By this accident I became acquainted with a phenomenon which is of great value in diagnosing rupture or perforation of the membrana tympani.

In the examination of aural affections,—explaining how I wished patients to observe the well-known variations of sound of the tuning-fork, I had often applied this routine to myself. After recovery, except laceration of the membrane, and in making repetition of this application to myself, I was greatly surprised that by *closure of the auditory meatus* by pressure on the tragus, I could not detect the variation that I had frequently heard previous to the injury.

Very naturally, on the same day I tried this method of examination on two patients then under treatment, and both of whom I knew by ocular inspection to have perforation of the drum-head, *and found the same result.* I then in like manner examined every other patient, and in *no instance* found that in the ear having a perforated membrane, did the sound of the tuning-fork increase by closure of the auditory meatus.

With each of eight membranæ tympani that were operated upon for the insertion of the "Politzer eyelet" to increase the hearing, the sound of the fork was increased by stoppage of the auditory canal previous to the perforation, *but not after it.* In six of these cases, after they were closed by granulation, I found that pressure on the tragus again caused increase of sound of the tuning-fork. With each of three membranæ tympani having traumatic opening, closure of the meatus did not increase the sound of the tuning-fork; but after the perforation had healed, sound was increased by this procedure.

In conclusion, I would add, should the Eustachian tube in any case of perforated membrana tympani be impermeable, this will be the only certain means of detecting this condition, especially if the opening be small and hidden.

1305 Washington Avenue.
January, 1874.

Progress of Medical Science.

A New Solvent for Phosphorus.—Many attempts have recently been made to obtain a tolerably stable and agreeable preparation for the administration of phosphorus in pills. Mr. Gerrard, of University College Hospital, by using resin as a solvent, has greatly simplified the administration of phosphorus as a drug. Its preparation is as follows: Take a strong, wide-mouthed, well-stoppered bottle and weigh it; then melt a quantity of ordinary resin sufficient to fill the bottle; let the bottle be warmed; then pour in the resin to nearly but not quite fill the bottle, and re-weigh, and for every ninety-six parts of resin take four of phosphorus. Now observe that the resin is in a fluid state; if so, add the phosphorus and fix the stopper tightly. Place in a sand-bath previously warmed, and apply heat to 200° centigr. or 392° Fahr. Digest at this temperature and shake frequently until the phosphorus is dissolved.

The further details of the manipulation are given by the *Pharmaceutical Journal* of Dec. 6th, viz.: Take of the phosphorated resin (4 per cent.), twenty-five grains; powdered white sugar, seventy-five grains; tincture of tolu, a sufficient quantity. Pulverize the resin, mix with the sugar, and form into a paste with tincture of tolu—eight to ten drops are sufficient—then divide into twenty pills; each pill will contain one-twentieth of a grain.—*The Lancet*, Feb. 14.

The Delirium of Inanition.—The nature of the delirium of inanition was recently discussed incidentally by Sir William Gull at the Clinical Society. Dr. Haust describes (*Le Progrès Médicale*, Jan. 3d) the symptoms observed in three cases who practically died from this cause, being the victims of cancer of the stomach. The first, a man aged fifty-five, took only a few spoonfuls of thin soup daily for the last few weeks of his life. The second and third were women, who were similarly starved for the last periods of their existence. In these three patients there was observable, during this period, a gradual lowering of the temperature, which, in the first instance, fell to 95° Fahr., and in the other two to 84.2°. These patients, during the last days of their existence, presented very similar disturbances of the intellect. Their physiognomy had a striking expression of studied satisfaction and dulness. The first patient would play with morsels of bread, and hide them under his pillow; then he fell for hours in a state of profound dulness. He was several times detected in the act of onanism. The patient, when roused from torpor, was constantly smiling in stupid fashion. The woman, when she was awake, had also an expression of great beatitude; she whistled, moved her fingers in rhythmical time, burst into loud laughter, or would remain for a long time together with her eyes fixed as in ecstasy. Larrey observed similar phenomena in individuals dying from the slow effects of cold.

Subcutaneous Injections of Ergotin for the Varicose Veins of Pregnant Women.—At a meeting of the Obstetrical Society of Berlin, in April, 1873, Dr. Rugge related a case where he had obtained marked results from the use of ergotin. A woman, 36 years of age, who had suffered exceedingly, during a previous pregnancy, from varices, came under his care in the eighth month of pregnancy, suffering from her previous trouble. The veins of the left leg and thigh were enlarged, dilated, and tortuous.

Injections were made subcutaneously with from one to two grains of ergotin, and repeated every few days. The action was very apparent after the first injections, and after the seventh, the varices had almost disappeared. The right extremity was not affected.

There was some pain and infiltration following each insertion of the instrument, but no abscess occurred. The ergotin had no influence in provoking labor-pains. —*Berl. Klin. Woch.*, 44, 1873.

Extirpation of the Larynx with the Epiglottis.—*The British Med. Jour.* of January 31st says that Professor Billroth, of Vienna, recently performed the operation of removing the larynx and epiglottis, a proceeding which had never before been attempted in the human subject, though Czerny had shown, in 1870, by careful experiments, that it was anatomically and physiologically practicable. The patient was a strong man, about forty years of age, the subject of cancerous growth in the larynx, which had repeatedly, after putting him in danger of death by suffocation, been removed by Dr. Störk with the aid of the laryngoscope. In the beginning of November the new growths extended so far into the interior of the larynx that their removal was no longer possible. As, however, a part of the right vocal cord was present, Drs. Störk and Billroth hoped to preserve this, however imperfect; they therefore opened the larynx from the front, and, after removing the growths, applied a solution of perchloride of iron to the inner surface. The result of this operation, which was well borne by the patient, appeared, at first, to be very promising; but in the middle of December new growths were detected by the laryngoscope, and at the end of a month symptoms of aphasia appeared. On December 30th, Drs. Billroth and Störk decided that the whole larynx was so full of malignant growths that it would be useless to repeat the operation of dividing it and clearing them out; and there was no longer a possibility of preserving the vocal cord. The entire larynx was therefore removed. The patient bore the operation very well. He breathed freely through the trachea, in which a tube was inserted; the fever was slight, and of short duration; and on the 9th of January the wound was healing favorably. On the 24th the man was reported to be able to eat and drink, and to sit up several hours daily.

Retention Cysts of the Female Urethra, and their Relation to the Formation of Caruncles.—Englisch, of Vienna, has frequently found at the post mortem examination of female infants, that cysts of the urethra have caused retention of urine, which has been accompanied by dilatation of the bladder, ureters, and pelves of the kidneys, and in some instances, atrophy of the kidney-tissue from pressure. These cysts are uniformly found in the neighborhood of the external orifice, and seem to be produced by the retained secretion in Littre's glands, which have their seat at this point.

If only a single such cyst exist, it presents a greater barrier to the flow of urine than several, because it gives a greater curve to the urethra, and because the mucous membrane often forms folds over the cyst. Epithelium is found in the interior, and it is claimed that the cysts formed in this way can always be dis-

tinguished from those that are produced by mere depressions in the mucous membrane, since the wall of the gland or membrana propria can always be distinguished in the former case; on the surface of this wall papillary outgrowths rise, and their extent varies with the size of the cyst.

Usually the cysts do not persist for a long time, but collapse, leaving depressions, in which the urine collects and decomposes, giving rise to the most troublesome irritation of the urethra.

After the lapse of time, and generally when puberty approaches, the capillary growths in these depressions give rise to the caruncles of the urethra. Dr. Englisch has collected thirty-five cases of this affection. The fact that they are met with so frequently about the time of puberty would point, he believes, to the chronic hyperæmia of menstruation as a cause, though pregnancy had a similar influence in a smaller number of cases.

Though there is usually no difficulty about the diagnosis; still, in some instances, as for example when they lie deep in the urethra, the symptoms may simulate stone in the bladder. If the sound in the urethra fails to detect them, the passage may be dilated, which is easily done by the dressing forceps, and then these bodies will be readily detected. When the disease is deep-seated, and cannot be reached by ordinary caustics, the author recommends dividing the urethro-vaginal septum. By this means the application of reagents can be thorough, and in most cases a cure will be effected.—*Med. Jahrb.*, iv., 1873.

Amyl Colloid in Shingles.—Dr. Herbert Morgan writes to the *British Med. Jour.* that he is anxious to direct attention to the great efficacy of amyl colloid in removing the pain attendant upon shingles, which, as is well known, is out of proportion to the appearance of the eruption, and is often the cause of sleepless nights and great general discomfort. As far as his experience goes, no drug applied externally or given by the mouth can be compared with the soothing effects of the amyl colloid painted for three or four coats round the clusters of the eruption. It may be applied as soon as the pain sets in, and continued twice daily as long as required; but it must not be applied on the eruption. In severe cases the addition of three or four grains of morphine to each drachm of the colloid will be found advantageous.

Reports of Hospitals.

BELLEVUE HOSPITAL.

Reports of Practice and Peculiarities in Treatment.

STRUMOUS DISEASE OF TARSAL BONES.

This is a condition not infrequently met in general practice, and the little patients seen well illustrated the leading features of the disease. The term strumous is used in its common acceptation. It is probable that the child, as is ordinarily the case, as soon as she began to walk, sprained the ligaments concerned in the tarsal articulations, and developed a low grade of inflammatory action. This occurring in a strumous habit, went on, the bones themselves expanded, but there was neither caries nor necrosis.

There was apparently a thickening and spreading out of all the tissues, entering into the composition of the tarsus, and a consequent general enlargement. The ankle-joint was not involved. Local treatment, non-irritating. Perforated lint, covered with simple cerate, and retained by a light bandage, was all the local application being made. The child was being saved by directing attention to the general constitutional condition. Good nourishment was a prime factor in the treatment. This, combined with such tonic remedies as seemed to be indicated, had already reduced the swelling of the foot fully one-third, and caused a manifest general improvement.

FRACTURE OF HUMERUS AND RADIUS.

There were some features of interest in a case of this order. The humerus had been fractured at the surgical neck, and the radius had suffered from Colles' fracture.

After the middle period of life, falls or blows received upon the lower extremity of the humerus and femur will produce fracture at the neck of either bone; while, as a rule, it is the reverse of this in the forearm and leg, where such violence is more apt to produce fractures at the lower extremity of radius and tibia.

The fracture at the neck of the humerus was oblique. It was said by the visiting surgeon, that in four out of five cases of oblique fracture of the surgical neck of humerus, union would take place without impairment of motion of the joint, but with a certain deformity, namely, the lower fragment would ride forwards and upwards. In this case the deformity was present, but shortening could not be detected by measurement. The deformity is believed to be almost inevitable, for the reason that extension and counter-extension cannot be applied without producing so much pressure upon the axillary plexus that it cannot be borne.

FRACTURE OF TIBIA.

The fracture was at the junction of the middle and lower third, and was the result of muscular action. It had been in plaster dressings for about four weeks, and now upon removing the apparatus, pretty firm fibrous adhesion was found.

A single suggestion, made by the visiting surgeon while the limb was undergoing the manipulation necessary to determine whether union had taken place or not, was of interest. He remarked that there need be no hesitation in moving the limb somewhat freely, from the fact that motion, when the fracture is in this condition, does not necessitate any evil results (as was formerly supposed, and has been testified to in court), if properly made. A slight bending motion given to the soft structure does no harm; but a sliding motion to and fro will prevent union.

FRACTURE OF THE PATELLA.

When inflammatory action has subsided, plaster-of-Paris splint, with the limb in a straight position, is a common dressing used in this hospital. Inasmuch as the union will be ligamentous, one thing is regarded by the visiting surgeons as being essential to the proper management of this fracture, namely, an early removal of the splint, perhaps at the end of the fourth week, and resort to passive motion. In practising passive motion, the rule observed is always to hold the upper fragment, and then give slight motion to the joint, and gradually increase it.

DELIRIUM TREMENS.

The great demand of nature in these cases is rest. It is believed by one of the visiting physicians that the most beneficial rest which can be obtained is that produced by muscular fatigue. More food and less medicine, and let the patient tramp it out.

Repeated trials of digitalis in this hospital has not established it as a method of treatment.

Correspondence.

BRIEF REMARKS ON THE FIRST PART OF MEDICAL AND SURGICAL HISTORY OF THE WAR.

By EZRA M. HUNT, M.D.,
METUCHEN, N. J.

To the Editor of The Medical Record.

Sir:—Part first of the "Medical and Surgical History of the War" has now been long enough before the profession for us to begin to estimate its value as a contribution to medical and surgical science. One cannot refer to its maps, and in many instances its graphic descriptions of battles, as related to the care and disposal of sick and wounded, without obtaining valuable knowledge as to the war itself; but these incidental interests are quickly suspended by that which attaches to it as a clinical, medical, and surgical history. Our profession was fortunate in having, from the first, at the head of the Medical Department, those who had heroic love of medicine as a science, and who therefore, as by instinct, early commenced to look for improvement of professional knowledge through the materials and opportunities furnished by the exigencies of war. Our present Surgeon-General was prompt and active in extending plans already initiated, and in adding facilities for securing and classifying results. He was especially fortunate in securing such assistants and collaborators as gave practical and enthusiastic efficiency to the effort.

Not to undervalue the aid of Crane, Brinton, Woodhull, and others, we cannot be deemed invidious in singling out the names of Woodward and Otis as those to whom we owe the largest debt of gratitude.

The one was artist as well as physician, and from the first in charge of the medical records, and the other not less a patient plodder after accuracy in whatever he undertakes. These were ably aided by superiors in office and assistants in execution, and now place before us two volumes, ponderous in size, but so full of available knowledge as to be not only medical and surgical records of the war, but encyclopædias for the profession. Early attention was given to some record and to the formation of an Army Medical Museum; but there was much lack of precise clinical statement as to field service until in January, 1864, a compact register was furnished, and medical officers devoted themselves with energy to the classification of facts and material already secured, and to the easier and prompter report of cases as they occurred.

The perfecting and extending the plan of the Army Medical Museum, and the circular of June 24th, 1864, show the pains used to secure reliable information, illustrated and tested by morbid specimens. Secretary Stanton, Surgeon-General Barnes, and the other officers in charge, comprehended the magnitude and importance of the work, and with enthusiasm and accuracy subjected to examination, classification, and illustration the immense material coming at their call within their disposal. They succeeded in stirring the zeal of all the best medical and surgical force in the service, and even at length availed themselves of all that was valuable in the less extended records of the Confederate forces. We thus have volumes far surpassing in importance and interest the French and English records of the Crimean War, and a book which takes the lead of all other medical and surgical army records. It at once is accepted as the grand pioneer of all national contributions to our science. It has occasion to be hailed by our physicians and surgeons as at once a recognition and exaltation of our profession in its intimate relations to patriotism and heroic defence of nationality.

It is indeed a successful endeavor to make the Medical and Surgical History of the War a contribution to science, a monument of the self-sacrificing zeal and professional ability of the volunteer and regular medical staff, and of the liberal provision of our government for the sick and wounded.

To review to any adequate extent would involve a volume rather than an essay, and we shall only attempt to notice some of its salient points and to estimate the relative importance of its contents.

The classification of diseases is based upon that of Dr. Farr; but some modifications were made, the propriety of which has been endorsed by the nomenclature of the Royal College of Physicians of London, 1869. The profession is well aware that there is still much defect in the nomenclature of disease, which can only be remedied by the increasing accuracy of knowledge as to its causes. We should not be perfectly clear in transferring Tonsillitis to Diseases of the Digestive Organs, and it has always seemed to us quite defective to make two classes of Constitutional Disease, placing as diathetic, or "predisposition to some disease rather than others," rheumatism, cancer, and the like, all in one class, and then making of Tubercular Disease a separate order.

But practically it was perhaps best to conform to the former nosology, with only such improvements as involved but slight modification. The use of English designations, instead of the "Latin version," is more convenient. By the separation of the Records of Departments and of Hospitals, and of the White from the Colored Records, we are able to make important comparisons. The supplement to the tables of the third fiscal year (p. 459) is also a valuable addition.

The regret is constantly experienced that we do not have meteorological records, so as to appreciate the relation of temperature, moisture, etc. For a period of over five years, in a mean strength of white troops of 468,275, the record in all is that of 5,825,480 cases of disease, of which only 7,187 are unclassified, and 166,623 deaths, of which 449 are unclassified. Allowing for all sources of error, yet an examination of the details of the report will, we think, convince any one that no more accurate series of statistics has ever been presented to the medical statistician. In addition, among colored troops we have, in a total mean strength of 63,645, 629,354 cases of sickness and 29,004 deaths. Of the most common zymotic diseases of the white troops, the following is, for our purpose, a sufficiently accurate statement of those in which the deaths exceeded 1,000:

There were of—

Typhoid fever	27,056	deaths.
Typho-malarial fever	4,059	"
Remittent fever	3,853	"
Congestive intermittent fever	3,370	"
Acute diarrhœa	2,923	"
Chronic diarrhœa	27,588	"
Acute dysentery	4,084	"
Chronic dysentery	3,229	"
Erysipelas	1,860	"
Small-pox and varioloid	4,717	"
Measles	4,246	"

The proportionate number of deaths to cases was large in typhoid fever, chronic diarrhœa, and measles. In the latter one out of 16 died

Consumption is reported as having 5,286 deaths out of 13,499 cases; but no doubt many of these latter were sent home to die, and so lost sight of on the record.

The low number of nervous or cerebro-spinal diseases is quite noticeable.

Of apoplexy we have but 1,045 cases and 790 deaths. Of paralysis 2,837 cases and 231 deaths. Of sunstroke, 6,617 cases and 216 deaths.

Of valvular disease of the heart, the report is 3,778 cases and 610 deaths. Our experience taught us that many cases reported as organic were only functional. Of inflammation of bowels the report is 5,702 cases and 940 deaths. Hemorrhage from the lungs reports 209 deaths out of 5,745 cases, and inflammation of lungs, 14,738 deaths out of 61,202 cases.

Zymotic diseases furnish us in all 3,285,366 cases and 92,150 deaths. Diathetic diseases, 288,287 cases and 1,226 deaths of order 1st.

	Cases.	Deaths.
Tubercular diseases.....	19,830	5,418
Diseases of nervous system.....	170,132	4,342
" circulating organs..	25,106	1,658
" respiratory "	448,923	17,902
" digestive "	563,239	4,146
" urinary and genital organs.....	29,875	430

All wounds, accidents, and injuries sum up 343,954 cases and 36,688 deaths.

This would leave all cases of disease 5,481,526, and of deaths from disease 129,935.

Our general ideas of war give prominence to surgery, but we thus see how much is purely medical. The additional 629,354 cases of disease and 29,004 deaths among colored troops do not materially modify these proportions.

The medical history, as contained in the first volume, is a valuable and well-selected record as given by various medical directors and other medical officers. While amid these necessary details there is much that is merely historical and incidental, yet many of them are full of valuable information as to localities and outbreaks of disease and topographical causes, as well as in reference to treatment.

We might easily designate some of these, which, from their condensation of style and clinical finish, must ever stand as models of army medical report. It is plain that the army medical corps was inspired with a professional as well as patriotic zeal, and that in most cases much pains has been taken to secure accuracy of medical and surgical information.

Both from statistics and from frequent references to reports, the large fatality of measles is especially noticeable, reference being also made to the fact that many who were reported as recovered afterward died or were discharged from lung complications. I am at a loss to account for the severity of the army epidemics of this disease, and that, too, where circumstances were favorable to treatment. We are again impressed that exposure and changes of temperature are much more dangerous in this than in small-pox and scarlet fever, and with the great influence of climatic and telluric condition in many cases.

The number of recoveries from lung wounds, in which blood was expectorated, seems to show that this class of injuries is not so critical as they have been regarded.

The subject of fevers as here presented excites much inquiry; but we await with great interest another volume, when Dr. Woodward will have opportunity to discuss with his known ability this whole subject, and to show the relations which these different types bore to each other; to point out their line of diagnosis and methods of treatment. Impure water oftener than any other cause is recognized as inducing large sickness and mortality.

The use of chloroform was very universal in surgical cases, and its safety as used on the field and in hospitals does not make it so dangerous as it is coming to be estimated in home practice. Have we not in this regard occasion to study complicating accidents rather than to limit its use?

The whole of the medical volume is so necessarily introductory that it is only when the second shall appear that we can come to appreciate the bearing of the whole as a contribution to practical medicine. It is, however, so far complete as an introduction, that Dr. Otis is able, in the surgical department, after a detail of casualties of battle, to enter at once upon a classification of injuries, and upon a consideration of them, such as will be presented as to medical cases hereafter.

The second part of the work is already therefore full of practical interest to all students of surgery.

The brilliant success of Dr. Woodward in microphotography enables us to realize the objective teaching of the Army Medical Museum; and with a liberality worthy of all praise, by the Surgeon-General's direction six quarto volumes of photographs of cases, which have been formally examined, have been sent to the principal medical colleges and learned societies of the country. The Museum has also, besides its specimens, fourteen quarto volumes of contributed photographs. As soldiers have visited Washington they generally have found their way to the Army Museum, and by personal inspection, by correspondence, and by the co-operation of the Pension Bureau, cases of interest have been re-examined with much care.

Circular No. 6 prospectively assured us that the work would be sedulously and faithfully done, and the volume is up to expectations.

Of this volume nearly one-half of the regional portion is occupied with wounds and injuries of the head.

In the 282 cases of incised wounds of the scalp, we have the small mortality of 6, so far as known. We think, with Dr. Otis, that the danger of sutures and wounds of the scalp has been over-estimated. The lips of the wound, if at all extensive, is less apt to be inverted. The sutures need not be drawn very tightly. They must not be left too long, and free discharge must be allowed.

In incised fractures of the scalp, out of the eleven who had fragments of bone removed, only one died, while the general fatality was over 20 per cent. We have before this had the view that many cases of skull injury prove fatal because of absence of opening in the skull, and this seems to illustrate that view.

The case of O'Hare, as reported by A. P. Clark, 6th New York Cavalry, is so remarkable, we should like more clinical information. His cut extended from near the outer angle of the eye across the temporal region, nearly five inches, and nearly two drams of brain escaped.

There was "much cerebral disturbance," but nine days after he returned to duty. In 1864 he was a blacksmith at the headquarters of the Army of the Potomac, and is not on the pension lists.

In other cases we have the evidence of the greater fatality of lateral and posterior injuries.

Punctured fracture of the cranium proved very fatal, as out of the six five died, and one was permanently disabled.

Erysipelas as a sequel of gunshot wounds of the scalp was rare.

Epilepsy was a not infrequent result of head injuries. Such cases as that of Bemis (p. 162), Lieutenant Burd (p. 180), Patrick Hughes (p. 206), etc., show us the wonderful possibilities of life amid the severest forms of skull and brain lesion.

The result of trephining after gunshot fractures of the skull are collected and detailed with great care from p. 261 to p. 295, and are more satisfactory than seems to us claimed, p. 320. The case p. 316 is interesting in its bearing on epilepsy and its relief. The recapitulation and general observations upon this large number of head injuries will be most valuable for future reference. In 175 cases of extraction of missiles penetrating the cranium, 89 were known to have recovered, and 83 to have died. Tables VII. and VIII., pp. 308 and 309, are worthy of careful study and analysis.

The recoveries from eye-injuries were frequenter than could be expected in military surgery.

Some of the plastic operations are of much interest, both as to method, ingenuity, and success.

Out of the 75 cases of ligature of the common carotid, we find the large mortalfty of about 58 cases. The case of recovery after ligature of internal jugular vein (p. 397), is one of much interest; so also is that reported in p. 422. The former case is spoken of at p. 422 as fatal. Among the wounds and injuries of the neck, amounting to over 5,000, the small number of deaths by hemorrhage is very noticeable.

The large number of chest wounds, of almost every description, and the care with which they are considered, add much to the material value of this volume.

Many cases are reported of recovery after penetration of both lungs by gunshot missiles. In some of these the proof, however, as to the wounding of internal tissue is feebly circumstantial. The plan of hermetically sealing the external chest wound, thus excluding the outer entrance of air into the pleural cavity, or the lung, as carried out by Surgeon Howard and others (p. 499), has much in theory and practice to commend it. Although not entirely new, it is thus brought prominently to notice. It is a plan not applicable to all cases, but that dyspnœa and some other symptoms were promptly relieved thereby is undeniable. Pages 519–522 are very interesting as to this treatment.

The statistics of pericardiac and cardiac lesions show the possibilities of life, and of occasional recovery under such injuries.

The record affords no instance of a wounding of the thoracic duct, and the same was the case as to the Crimean War.

The chapter on ligation of the chief arteries about the chest is full of interesting detail.

Case 15, on p. 587, not only shows how the lung tissue will tolerate and provide for a foreign body, but also the kind of transformation which the lung undergoes and the occasion of chalky deposit. Tubercle itself sometimes has a similar history. The case p. 596 is remarkable throughout. The frequency of pneumonia after wounds of the lung is not so general as Erichsen has stated it. In fact, we cannot rise from the study of this great collection of lung cases without feeling that prompt measures and proper remedies accomplish more with the lungs than with any other of what are called the vital organs. Our own experience greatly impressed us with this view. The plan for relieving pneumothorax, hydrothorax, hæmothorax, etc., by a valvular opening (p. 627), allowing egress, but preventing ingress, seems theoretically valuable, and is worthy of more extended trial.

Hæmoptysis is spoken of as of doubtful value as a sign of lung wound. It is true that it may occur from concussion or other causes, but generally where there is a wound of the chest wall, and hæmoptysis following, we should not, with Chisolm, speak of spitting of blood as "a very deceptive diagnostic sign."

The extract from the Confederate Surgical Manual (p. 644) as to venesection in chest wounds and its inapplicability except for "general plethora or local visceral engorgements," cannot be too carefully regarded. Under the head of treatment we draw attention to three most valuable remarks. Opium is so often required that it merits the first place, and pure opium in substance, as Dr. Squibb remarks, is more reliable than any preparation. As to calomel, Mr. Wharton has ably directed attention to the fact that "sufficient importance has not been paid, in the treatment of these lesions, to the necessity of maintaining the blood in such a condition as to favor its coagulability, on which the natural reparative process depends. Great caution should therefore be exercised in administering any drug likely to appreciably diminish the normal proportion of fibrin."

On veratrum viride, which Clark says can kill splendidly, Dr. Otis well remarks: "I believe that any good results to be obtained from it may be arrived at with greater certainty and safety by using antimonials combined with narcotics."

Part first of the surgical volume ends worthy of itself, and the last two pages are almost good enough for committal. There are many points and cases upon which we would have liked to enlarge did time permit.

Dr. Woodward and Dr. Otis, under the intelligent patronage of the Surgeon-General and Government, are doing a service of philanthropic not less than scientific merit.

We await with interest the other volumes, and doubt not they will worthily complete a record of lasting value to our profession and to humanity.

THE HISTORY OF THE OPHTHALMOSCOPE AS AN OPTOMETER.

REPLY TO DR. EDW. G. LORING'S COMMUNICATION.

By H. KNAPP, M.D.

To the Editor of The Medical Record.

Sir:—I am anxious to acknowledge the correctness of an historical information with which, in the above cited communication, Dr. E. G. Loring honored my paper on ophthalmoscopic optometry, read before the New York County Medical Society, and published in your journal on Jan. 15, 1874. I had been under the impression that I was the first who described (at the International Congress of Oculists at Paris, in August, 1867) the method of measuring, by means of the ophthalmoscope, elevations and depressions in the background of the eye; but by Dr. Loring's quotation, the correctness of which I have verified, I see that Dr. Mauthner described the same method eight months previously in the *Austrian Journal of Practical Medicine*, on Dec. 28, 1866. Dr. Loring did not mention this fact in the discussion on my paper, but merely stated that a part of Mauthner's treatise of 1868, upon which my opinion was based, had appeared in 1867. I replied that I did not think this was a sufficient evidence of my having been anticipated by Dr. Mauthner, nor had any one, at the Congress in Paris, informed

me of such an anticipation. On the contrary, I had been complimented on the elegance and novelty of the method of which, I may be allowed here to add, Sichel père said, after the session, that it could be used to delineate an "*orographie du fond de l'œil*" in the living subject. The optical deduction which I gave at that time, and which is published in the Transactions of the meeting, differs from that which Mauthner used, and which he took from Helmholtz's general discussion of the dioptrics of the eye. I make these statements to show that I arrived at the method independently, and, though mistaken, acted in good faith when I said that I had described the method first. The quoted article in the Austrian Journal decides the question of priority in favor of Mauthner.

Apart from this, there is another incorrect assertion in my paper. I had been hasty in saying that a case of hyperopia $\frac{1}{4}$ in one eye and $\frac{1}{3}$ in the other—which had come under my notice and was cited for the sake of illustration—represented the highest degree of hyperopia ever observed in eyes possessed of their crystalline lenses. I see, from the quotation in Dr. Loring's communication, that a few cases are on record which show still higher degrees.

I am under obligation to Dr. Loring for these two of his statements, but have no other concession to make. That ametropia can be determined with the ophthalmoscope is mentioned in the earliest as well as in the most recent literature on ophthalmoscopy; in fact, the method of examination in the erect image must suggest it to everybody. I therefore cited no authors on this subject, and certainly did not myself presume of claiming any merit in it, nor can such a presumption be found in what I have said or written. As a useful method in practice, however, this mode of determination has been more generally cultivated during the last years only. That Dr. Loring was one of its promoters I have acknowledged in my paper, and I gladly repeat it. Should he, however, even at the present day, visit the different ophthalmic clinics, both in this country and in Europe, he would convince himself that the method of determining, with the opthalmoscope, the optical condition of the eye—for which I have ventured to propose the expression, "ophthalmoscopic optometry"—is still little practised, and he would, I trust, exonerate me for introducing it to an audience of physicians in general practice as having, in addition to its usefulness, some claims on their attention on account of its comparative novelty.

TREATMENT OF SORE NIPPLES.

By EPHRAIM CUTTER, M.D.,

WOBURN, MASS.

To the Editor of The Medical Record.]

Sir:—In your issue of September 15, 1873, I noticed some excellent remarks upon the above subject by Prof. Fordyce Barker, and I write to add a contribution which I think deserves some attention, viz.: that by removing the mechanical conditions that help keep up the disease, you are giving the systemic and topical medicines a better chance of completing a cure of this apparently trivial but common and sometimes very painful affection.

Some years ago, when my wife was troubled with sore nipples, the idea occurred to me whether the deranged physical conditions of an inflamed and ulcerated nipple did not aggravate it.

I. The nipple projects naturally horizontally forwards, standing prominently upon the most elevated point of the convex surface of the breast. Of course it impinges upon the concave surface of the dress enclosing the chest—generally rather stiff, unyielding corsets—and the nipple is driven inwardly into the convexity of the breast. If the mammary gland is soft and inactive no appreciable trouble results except the flattening of the nipple, which sometimes becomes permanent. But during lactation the gland is generally distended and hard, so that the sore nipple is, as it were, crushed against it. This crushed condition must interfere with the circulation and interfere with the healing process.

II. This flattening of the nipple causes a deep reentrant angle to be formed at the base of the nipple—where the sores are often found—by the sides of the nipple and the breast. This fold keeps out the air and puts the skin involved into the condition of a mucous membrane. The secretions are retained, the epithelium is softened, and after a time the nipple becomes illy fitted to bear the grip of the alveolar processes of the infant.

III. Allow a looseness of dress, still the nipple, generally more erectile the more it is inflamed, will be touched by the lateral movements of the dress, and consequently kept moving from side to side. In this case the physical conditions are analogous to those of fissure on the knuckle of a finger—hard to cure because always moving.

Now remove the flattening—the moist condition and the motion of the diseased nipple—and you so restore the normal condition that often, without any other assistance, it will recover. Or, to put it differently, give it *rest* and *ventilation*, and it will get well of itself.

The problem is, to have the nipple, during the intervals of suckling, protected from the pressure of the clothes and freely open to the circulation of *dry* air. Dryness is a normal condition of the skin, as moisture is of the mucous membrane. To accomplish this, disks of cork about $2\frac{1}{2}$ inches in diameter and $1\frac{1}{4}$ in thickness were selected. A central opening was made, and then enlarged by filing with a common rat-tailed file until the opening on one side was within half an inch of the edge, and the opening on the opposite side was about one inch in diameter. With sand-paper the surfaces are smoothed and rounded. A common two-gallon milk-can cork suffices. Thus you obtain a conical excavation within the cork which will cover the nipple, keep off the clothes, and allow ventilation. The lightness of the cork, its being a non-conductor of heat, and its facility of manipulation, entitle it to a first place for this purpose. At first sight it might appear that the cork would absorb the secretions, so as to become offensive. I have not found it so. It is easily cleansed by pouring on boiling water.

With this device remedies may be employed. I have found an ointment of a grain of sulph. morphia to a drachm of lard an excellent application after suckling, to be removed if not absorbed before suckling.

It is but justice to add that Kent's nipple-shield is something on this principle. But his device is of glass, and fits tight to the nipple. It does not present such broad surfaces for impinging upon the breast or clothing, nor the lateral openings through the sides which may be made through the cork.

In conclusion, perhaps I may say that the device just described relieved my partner's pain, and a cure soon followed. This experience has been repeated with other women's sore nipples so frequently, that the writer feels justified in sending this paper to The Medical Record.

January 31, 1874

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, April 1, 1874.

CONSULTATIONS IN THE COUNTRY.

NOTWITHSTANDING there are a great many rules laid down in the code for the government of consultations, there are still some points in the unwritten law of medicine, in regard to them, which are either not understood or are purposely ignored by very many practitioners. For a thoughtless or ill-disposed person there is always an opportunity, which, if ignorantly or meanly seized during a consultation, can be made to be injurious, nay, ruinous, to the regular attendant. The dangers are indeed so great that, in order to guard against them, the consulting gentleman has his actions hemmed in by all sorts of restrictions, and is always expected to strain a point and conscientiously use every honorable means to strengthen and maintain that confidence and esteem which should always exist between the family physician and patient. There are different ways of doing this, which must suggest themselves to every consulting practitioner, and which must be modified by circumstances, surroundings, and conditions.

The very office of consulting physician generally carries with it such advantages that almost always the claim for protection and support must come from the gentleman in direct charge of the case. The necessity for a consultation generally proves the existence of a desperate case, one in which extra counsel is required. The consulting physician is either chosen by the patient, the physician, or both, and for the time being is looked upon, by the friends of the patient at least, as an adviser whose opinions concerning the particular case in question are of a peculiar value. We maintain that the consulting physician, while he admits to himself the necessity for his services, and accepts the choice as a compliment to his skill and abilities, should be exceedingly particular to discharge his delicate and responsible duties to the satisfaction of the patient's friends, and especially to the patient's physician.

Consultations are always useful, and all other things being equal, cannot be held too frequently. They are not only a great relief to the minds of our patients and their friends, not only a source of satisfaction to ourselves, but in the main tend to establish a confidence in the healing art, a respect for medicine as a science, a more thorough appreciation of its resources, and a conviction in the minds of our patients that we as a class of professional men are anxious and willing to do everything which a combination of skill and experience can effect. For either party to the consultation to attempt to make capital of the circumstance, is not only unprofessional, but unbecoming that spirit which seeks the welfare of suffering humanity in the light of a strict and conscientious interpretation of scientific truths. Under these circumstances individual considerations, and self-glorifications, should be lost in the desire to elevate the profession as a whole. We do not believe that anything tends to destroy this confidence more effectually than an attempt on the part of either member of the consultation to prove to non-professionals the possession of a superior knowledge and skill.

Despite all our efforts, there must be some wrongs inflicted, some misunderstandings initiated, some unwarrantable estimates of relative skill made by our patrons. All cannot be expected to be equally informed, skilful, or discriminative; we all differ in these respects, one with another. It, however, should always be the endeavor of the new-comer into a case, the one whose aid and counsel is sought, to reduce the chances of an over-estimate of his abilities to the minimum. Taking a strictly honorable view of such relations as should exist between the consulting and family practitioner, this should always be the case. A consulting physician or surgeon is called in to aid both the family attendant and the patient, and nothing more. He does not sacrifice any of his interests by a manly course of action to both parties, and as his attendance with a given case is expected to cease with the consultation, there is no temptation for him to aspire for any further or future control of the patient; at least there should be none.

Cases not unfrequently arise in which peculiar circumstances should alter the usual relations of practitioners to each other, for instance, where special operations are to be performed, in which a special experience is required. The one who has such skill should give the patient the benefit of it, and no considerations of professional pride, and no liberal interpretation of the code should interfere. It would be worse than criminal for any practitioner, merely bent on maintaining a hold upon his patient, to insist upon performing an operation, which at best he could do in a very bungling manner, in the presence of the other party to the consultation, who may be an expert. But in these cases common courtesy generally adjusts all such difficulties, and when the professional positions of each are honorably and properly balanced, no advantage can be taken by one over the other.

But we have been alluding to misunderstandings which may arise in the best regulated consultations, and for which neither party can be blamed. There are other matters connected with these professional intercourses which cannot be included in such a category, but which are open and defiant violations of ordinary professional decency. We refer to a practice which of late has come quite into vogue, and which, in the magnitude of the evil influences which it may exert, will probably outshine all the rest. It is well known that there are certain customs which must regulate consultations at a distance, that the emergency of a given case, and many other considerations may make it impossible for two consultants to meet punctually. All allow of such possibilities, and none are willing that the patient should lose the benefit of the opinions of either member of the council on that account. Each physician can examine the patient separately, and give an opinion separately, without interfering with the other, and giving the patient every benefit. Every practitioner knows how this can be done, without making it necessary to go into detail.

Strange as it may seem, however, we have yet to learn that there are exceptions to these rules, to be made wholly in favor of metropolitan practitioners who may be summoned by telegraphic despatch to see patients in distant parts of the country. Every one knows how natural it is for families who can afford to pay well for services, to use every means in their power to save the life of one of their members, and that very often they act independently of their family medical adviser in the matter. The custom of sending for practitioners from a distance has become an established one, and the abuses connected therewith are by no means few and unimportant. When a message is sent by one physician to another, the case is plain enough; but when the request is made by the friends of the patient, there is a good deal of room for doubt as to the regularity of the proceeding. Under the circumstances there is not much time for explanation, and the first train is taken for the point of destination. Not unfrequently the family attendant is in readiness to meet his metropolitan brother in consultation, and then the case is still a plain and uncomplicated one. If, however, the metropolitan is hurried to the house to see the patient alone, prescribes, and hurries back to the depot, the case, in the matter of professional courtesy, is no longer a simple one, especially if a medical gentleman is already in attendance upon the case. He may be nothing more than a country practitioner, it is true; but still, even country practitioners have been taught to believe that they have some rights, and are apt to feel quite ticklish when such rights are impudently and unnecessarily assailed. If such cases were not constantly occurring we could hardly believe in their possibility, and would deem ourselves guilty of appealing to our imagination instead of facts. We have now in mind a case which occurred within a few miles of this city, and to which a very prominent practitioner here was hastily summoned by the patient's friends. Not being able to respond, he sent his assistant, to whom was delegated the right to speak and act for him. The assistant makes the journey, arrives at the house of the patient, who was sick enough to create no doubt in his mind that another practitioner was in attendance. He asked no questions concerning the family physician, nor did he apparently care, and altered the whole plan of treatment, the importance of which was magnified by his fussiness and his gloomy prognostications. The regular attendant arrives subsequently, to use a mild expression, is astonished, and vainly imagines that there must have been some misapprehension on the part of the consulting physician; but all doubts are removed when, the subsequent day, the assistant sends a medical friend to watch with the patient, to see that there is no interference with the new treatment.

This is only one instance of many of a similar import that has come to our knowledge. If there can be any excuse for such proceedings we should like to know what it is. When a patient is under the care of a quack, the quack deserves to be entirely ignored; but when a respectable practitioner has charge of the case, the professional obligation of a second party is slightly altered. If not, there is no need of any honorable professional understanding among men, big or little. No one can believe that any medical man has a right to see such a case without ascertaining if there be any physician in attendance, and having ascertained such a fact he is, under the strongest possible obligation, to see the patient, if possible, only in the presence of such an attendant. If any peculiar circumstance prevents this, the opinion can be given under seal; but no direct alteration in the plan of treatment should, under the circumstance, be received in any other light than that of an insult. Any medical man who may be guilty of such a misdemeanor is liable to the most rigid discipline, and we hope that the parties injured will not be backward in preferring charges before the County Society. The larger the man, the greater his reputation, the better example for just punishment. Our astonishment that such unprofessional practices do actually exist is only equalled by our disgust for such as can lower their professional manhood to stoop to them.

RECEPTION HOSPITALS IN THE CITY.

We have repeatedly pointed out the necessity for small reception hospitals in the different sections of the city, not only on account of their convenience and comparative cheapness, but because a small hospital is a much better place to treat the sick than a larger one. It is unnecessary to detail the reasons for these conclusions, as they are now sufficiently appreciated by the profession at large, and have been time and time again presented by the leading sanitarians throughout the civilized world. Now it would appear that a practical turn is about to be taken in the

proper direction. The governors of the New York Hospital have decided to open such an institution in Sixteenth street, and it is to be hoped that its success and the proof of its urgent need in one section of the city may induce them to open others in other sections. At present there are but two reception hospitals—one at the Park and the other at Harlem; and during the past year this former institution, with a capacity of only thirty-one beds, cared for thirty-five hundred cases. The latter did a work in equal proportion to the number of the population in its district. We want at least four more institutions scattered over the city, principally on the east and west sides. Cannot the Commissioners of Charities and Corrections also do something towards ministering to such necessities?

HOSPITAL APPOINTMENTS.

As an evidence of reform in hospital appointments, we are pleased to notice that the members of the House Staff of the Reception Hospitals, instead of being appointed by the Commissioners of Charities and Corrections, are now compelled to submit to an examination by a Medical Board before such appointments can be secured. This system has been inaugurated by Prof. F. H. Hamilton, the Surgeon-in-chief of the said Hospitals, and has been attended with the best of results. For a number of years the positions on the House Staff of Bellevue, of Charity, and other large Hospitals have been secured by such means only, and the young men who occupy these positions reflect credit upon the profession at large. There is no question that the plan is the best that can be adopted, and that it should extend to every hospital and dispensary throughout the land, to the police surgeons, to all positions of medical trust, and even to the visiting surgeons and physicians of all our public charities.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 10, 1873.

DR. E. L. KEYES, PRESIDENT, in the Chair.

DR. J. LEWIS SMITH presented a specimen of

DIPHTHERIA,

with the following history: T., aged three years, died after a sickness of about one week from diphtheria, which supervened upon measles. During the last four or five days of the disease the symptoms, namely, stridulous inspiration, depression of the sternum during inspiration, and lividity of the lips and tips of fingers, indicated extreme laryngo-tracheal obstruction. The fauces, which were inspected each day, were constantly swollen and injected, but without a pseudo-membrane. Five days before death the pulse was 164, respiration 28 per minute, and temperature 101¼°; two days before death the pulse was 160, respiration 28, and temperature 104°.

The post-mortem examination embraced only the larynx, trachea, and commencement of the bronchi. A continuous pseudo-membrane extended from the tip of the epiglottis downward over the mucous membrane as far as it could be traced in the dissection. It was thicker and firmer below than above, so that it probably extended into the smaller divisions of the bronchial tree. It was somewhat pultaceous on the under surface of the epiglottis and in the larynx, but it could not be readily separated from the mucous membrane; while in the trachea it was readily detached in a thick and firm layer. The mucous surface underneath presented a deep-red color, and was considerably thickened by hyperæmia and infiltration.

It seems evident that the disease of which this child died was diphtheria, and not true croup, from the fact that the former was epidemic in the institution at the time, three children having diphtheritic inflammation of the eyelids in the same ward in which this patient was treated.

During an epidemic of diphtheria the specific inflammation is apt to attack those surfaces which are already inflamed or irritated, and in many patients it affects only such. Therefore if it attack a patient with scarlet fever, its seat is the fauces, and if, as in the present instance, one with measles, in which there is general inflammation of the air-passages, it ordinarily involves not only the fauces, but also the surface of the larynx, trachea, and bronchial tubes, being, therefore, from the extent and thickness of the pseudo-membrane, ordinarily fatal. The three children with diphtheritic conjunctivitis, alluded to above, were previously under treatment for inflammation of the eyelids.

It is important, both as regards prognosis and treatment, to determine in cases like the above, in which there is obstructed respiration but no pseudo-membrane on parts which are visible, whether the laryngo-tracheitis is catarrhal, with an unusual degree of infiltration, or pseudo-membranous. From my observation of these cases I do not doubt, if the dyspnœa do not begin to abate by the second or third day under appropriate treatment, that we are contending with a pseudo-membrane.

This patient was treated with quinine, iron, and alcoholic stimulants internally. The quinine was administered in moderate doses; but in severe diphtheria and scarlet fever large or frequent doses of this agent are tolerated, and are sometimes apparently useful. When I entered on duty in the Asylum in the same epidemic, one of my colleagues was treating a patient of three and a half years, having severe scarlet fever and diphtheria, with two grains of quinine administered hourly, and though forty-eight grains had been given in twenty-four hours, the pulse was 156 per minute, and the temperature, 103¼°, showing that there was not such reduction of pulse and temperature as ordinarily attends the employment of large doses of this agent. The patient recovered, the quantity of quinine administered daily being, however, reduced to twelve grains.

The local treatment in the case which I have related consisted in the application to the fauces, every three hours, of the following, which has given me better satisfaction than any other medicine for local treatment which I have employed:

℞. Acidi Carbolici.....gtt. v.
Liq. Ferri Subsulphat.....℥ ij.
Glycerinæ.....℥ i.
M.

The brush was employed in preference to the probang, as it is less painful, and where there is a pseudo-membrane does not produce hemorrhage by its detachment.

The small room in which the child was treated was also filled, as far as possible, with steam. As steam or water softens the epidermis, so I believe that it softens and aids in the removal of the pseudo-membrane, which is mainly epithelial, more effectually than any other local measure. In each of the shallow pans from which the steam was generated, a small lump of quicklime was placed, so that the steam was charged with particles of lime, which were quite perceptible in the breath. If much lime be added, the water becomes too thick or syrupy, so as to diminish the evaporation, and therefore render the quantity of steam insufficient. The spray of lime-water, whatever may be its solvent effect, certainly renders the respiration in a close and hot room more tolerable, perhaps from its rapid absorption of carbonic acid.

INTUSSUSCEPTION.

This specimen shows an intussusception occurring in the ileum, about one foot above the ileo-cœcal valve. The child in whom it occurred was thirteen months old at the time of death. On the day before its death, its previous health having been good, it seemed ill, and vomited once or twice, but did not appear to be in pain. It had two evacuations from the bowels, of the usual appearance, in the latter part of the day. On the following morning it was unexpectedly in collapse, and died in about twenty-four hours from the commencement of its sickness.

At the post-mortem examination the head was not opened, and all the organs of the trunk were found normal, except the intussusception. The mass involved in the displacement measured two and a half inches in length, and was slightly crescentic. The mucous membrane immediately above and below it had the normal color and appearance, as did that of the external or incarcerating portion of the mass, while that of the incarcerated portion was deeply injected. Water poured into the intestine above the invagination was wholly arrested by it.

It was evident from the size of the intussusception, and the strangulation of the vessels in its interior, that it must have occurred some time before death, probably the day previous, at the time of the vomiting, and that it could not have been reduced by the vermicular and peristaltic movements. It was apparently the cause of the collapse and death. This case, with others which I have reported, is interesting as showing that that form of intussusception which Rilleit and Barthez designated intussusception with symptoms, in contradistinction to the simple form, which occurs without symptoms, may take place in the small intestines of young infants, contrary to the opinion of these observers. In nearly all instances fatal intussusception in infants occurs in the large intestines, but the cases which I have reported establish the fact of an occasional exception. In a recent valuable paper on intussusception, D. Jonathan Hutchinson alludes to death by collapse as one of the modes of termination in cases of this displacement.

PERTUSSIS.

Male, aged 4 years, died in the seventh week, of pertussis. Was treated at first by quinine, and then by belladonna. The cough had been severe, but in the last week of his life was quite moderate. He also had diarrhœa during the last two weeks, accompanied by febrile movements, and due, as afterwards appeared from the post-mortem examination, to severe enterocolitis. In the few days immediately preceding his death he seemed slightly delirious, and the movements of his head were such that the physician in attendance diagnosticated meningitis. On the day before death the pupils responded to light, a few moist râles were observed in the chest, the respiration was accelerated, the pulse 160 per minute, and temperature 102¾°.

Autopsy.—About one ounce of transparent serum flowed from the cranial cavity, evidently having escaped by transudation from the engorged vessels; venous congestion of brain and meninges; cranial sinuses engorged with blood, containing large, dark clots; numerous "blood points" on the incised surface of the brain; encephalon otherwise normal. Lungs: mucous membrane of larynx and trachea nearly normal, slightly vascular; both the upper lobes and anterior portions of the lower inflated to the utmost, and exsanguine, presenting the lesion of incipient vesicular emphysema; the alveoli in these portions are visible to the naked eye; right middle lobe and posterior and inferior portions of lower lobes collapsed, and allowing only slight expansion by insufflation; left auricle and both ventricles of the heart empty; right auricle distended with dark blood, and containing clots; entire mucous membrane of large intestine deeply injected and thickened, and that of the lower part of the ileum also hyperæmic, but in less degree and with little thickening. A few superficial ulcerations were observed upon the mucous membrane of the colon, and also at one point a thin film as of a pseudo-membrane.

The febrile movement in this case, which, in connection with the cerebral symptoms, was supposed to indicate meningitis, was, no doubt, due to the enterocolitis. The cerebral symptoms were attributable to the passive congestion of the meningeal and cerebral vessels, and the consequent serous transudation. In all cases of pertussis more or less cerebral congestion attends the paroxysms of coughing, but it is only when they are frequent and severe that intracranial serous effusion, like the œdema of the eyelids, is apt to occur. The greatest amount of cerebral and meningeal congestion and transudation occurs when eclampsia complicates the paroxysms, and such cases are apt to be fatal from coma, which this affection of the encephalon produces.

These specimens show what portions of the lungs experience most the pressure from the air confined within their alveoli during the paroxysms of pertussis, and from what portions the air is most withdrawn, so as to endanger or produce collapse. Emphysematous distention of both superior lobes, and of the anterior portions of the lower lobes, had occurred, proving the correctness of the theory that emphysema does in certain instances result from forcible expirations.

The comparative effects of quinine and belladonna as remedies for pertussis were observed in this case. My own experience with these agents, now in a considerable number of cases, without, however, any exact statistics of their effects, incline me still to prefer belladonna in ordinary cases, given twice daily in doses sufficiently large to produce its physiological effects. An abatement in the severity of the cough may be confidently expected when the belladonna has been employed a few days. Quinine is useful, in addition to external irritation, when there is febrile movement with accelerated respiration, due to bronchitis or broncho-pneumonia. If cerebral symptoms arise, as in the above case, bromide of potassium I have found more useful than any other remedy, administered alone or with iodide of potassium.

THE MEDICAL RECORD will have its leaves cut for the convenience of our readers.

Stated Meeting, Dec. 24, 1873.

DR. ERSKINE MASON, PRESIDENT, in the Chair.

SEQUESTRUM IN AN UNUSUAL SITUATION.

DR. POST presented, first, a sequestrum which had been removed from the thigh of a patient about 45 years of age, colored, and an inmate of Presbyterian Hospital. The specimen was interesting chiefly on account of the locality in which it occurred. The patient spoke vaguely of his preceding history, but about two years ago noticed a swelling at the upper part of the thigh, and about one year ago suppuration occurred at that point and matter was discharged. When he first saw the patient there was a sinus situated at the outer and upper portion of the thigh, near the middle, which extended upwards to near the trochanter; probably not more than two inches below the great trochanter, in which dead bone could be felt. Whether the great trochanter was implicated or not could not be determined. A long, free incision was made through the soft parts down to the bone, the finger introduced, and it was found that it penetrated a smooth, rounded opening at the outer and anterior part of the bone, and a loose portion of bone could then be felt. A strong pair of forceps was introduced, and the piece of dead bone removed without difficulty. There was an imperfectly formed involucrum, and the cloaca was sufficiently large to allow the sequestrum to be removed without further enlargement. A localized necrosis in that portion of the thigh-bone is not common, at least, and to him was something new.

VESICAL CALCULUS—LITHOTRITY—DEATH FROM NERVOUS PROSTRATION.

Dr. Post inquired whether any gentleman present had met with necrosis in that portion of the thigh from which his specimen had been removed.

The President, DR. MASON, replied, that he had not seen necrosis at that exact locality, but had seen it just above the trochanter, and involving the neck of the bone, and that he had heard of two more cases of a similar nature.

Dr. Post presented a second specimen, consisting of the fragments of a calculus. He was called, in the month of August, 1873, to visit a man, 62 years of age, who had suffered from symptoms of vesical irritation for the last two or three years, but had never been sounded. Some fragments of stone had been passed spontaneously, which had been collected. The patient was sounded with a lithotrite while under the influence of ether, and he was able to grasp a stone about three-fourths of an inch in diameter. The patient had expressed a strong desire, previous to the sounding, that nothing should be done in the way of crushing the stone at that time.

A scale of stone weighing about two grains came away with the instrument when it was withdrawn. A day or two subsequently the patient was again visited, and an attempt was made to crush without using ether. The patient, however, complained excessively while the manipulation was being performed, and the operation was deferred for a couple of days. At the end of two days the patient was etherized, the lithotrite introduced, and after a little effort the stone was firmly seized and crushed. Some fragments came away with the instrument, and others came away afterwards. The patient, after the operation, was left mainly in the care of the attending physician, but the doctor was called to see him in the night of the following day, and found that he was suffering from severe diarrhœa.

Since the operation the vesical irritation had rather diminished. The diarrhœa had become uncontrollable, the rectum was very irritable, but another effort was made to check the discharges by administering ℥ x. Magendie's solution hypodermically. The diarrhœa became somewhat less, but the patient died before morning. Death was apparently caused by extreme nervous prostration and the irritable state of the bowels, in connection with the oppressive weather which occurred at that time. The death of the patient was not regarded as legitimate from the operation. The Doctor remarked that this was his first case of stone in the bladder which had terminated unfavorably while under his treatment.

The President, DR. MASON, then inquired whether there was any bloody urine passed, or whether there was any suppression of urine previous to death in Dr. Post's second case, and was answered in the negative.

GLIOMA-SARCOMA OF UPPER THIGH AND GLUTEAL REGION.

The PRESIDENT presented, first, a tumor which had been removed from the posterior portion of the thigh of a woman, 33 years of age, who had always enjoyed good health.

In August, 1872, she first noticed that her left leg and ankle were rather weak, and occasionally she would suffer considerable pain in the neighborhood of that ankle. The recurrence of pain continued in the neighborhood of the ankle and foot up to October, 1872, when, while in the act of sitting down, she felt a sharp pain in the posterior portion of the thigh, and then noticed, for the first time, the existence of a tumor situated about the middle of the posterior portion of the thigh, which when first discovered was about the size of her fist. This tumor gradually increased in size, and without any apparent detriment to her general health. When admitted to Roosevelt Hospital she presented a growth occupying the posterior portion of the left thigh, of ovoid shape, with a prolongation upwards. The tumor measured in its long diameter 9¼ inches, extending from the upper part of the popliteal space upwards to the gluteo-femoral fold. The thigh over the tumor measured 17¼ inches. The opposite thigh, in a corresponding locality, measured 14¼ inches in circumference. The calf of the limb affected was somewhat atrophied, measuring one inch less in circumference than the calf of the sound limb.

The tumor now gave her great inconvenience while sitting, and pressure from above downwards, or by passing the fingers along the sides of the tumor, would also cause pain. The tumor was freely movable in a lateral direction, but up and down it seemed to be attached. It had commenced growing somewhat rapidly, and had extended in rather an upward direction. On the 11th of December the tumor was removed. Upon cutting through the integuments and fasciulata, the tumor was noticed to be covered with a thin layer of muscular fibres.

This being cut through, a dark-colored tumor was exposed, and it became apparent at once that it was connected with, or in some way involved, the sciatic nerve. Upon farther examination it was found that the nerve not only entered the tumor, but was spread completely over it, rendering it impossible to separate the growth from the nerve. The nerve was accordingly divided above and below the tumor, and the mass was then easily enucleated. Very little hemorrhage attended or followed the operation. The wound was dressed in the ordinary manner, using, however, only two sutures. Reaction was bad.

The patient was quite prostrated, and an hour or more passed before she rallied from the effects of the

ether and the operation. At 6 P.M. (3¼ hours after) of the same day her general temperature was 98½°; that of the foot, 98¼°. On the following day her general temperature in the morning was 100½°; foot, 99°. Evening, 102°: foot. 101¼. Sensibility was absent from plantar surface of the foot and external surface of the leg, especially about the lower border. Sensibility absent from the posterior portion of the calf of the affected limb, but that is returning, and she can now feel in that locality. She is able to flex the leg upon the thigh, and the thigh upon the pelvis, and extend the leg. There is no motion of the toes, or flexion or extension of the ankle. The wound healed with great rapidity, without an unfavorable symptom, and the woman is now able to sit up, with the wound almost completely closed. No atrophy of the limb has occurred as yet. On the 21st of this month she experienced a slight twitching of the foot and toes, and a slight tingling sensation in the sole of the foot.

The tumor was placed in the hands of Dr. Francis Delafield for microscopical examination, and he has furnished the following report:

"The tumor consists of a dense fibrous capsule enveloping soft hemorrhagic tissue. This tissue consists principally of small, round cells. The growth seems to have originated in the nerve-bundles, and apparently from the neurolemma of the nerve-fibres. It would therefore be called a glioma or glio-sarcoma of the nerves." The third day after the operation the temperature of the foot became the same as that of the general system. The patient has since been discharged from the hospital, and at the time of her discharge was able to walk quite well, a bandage being so applied as to retain the foot at right angle with the leg.

ABSCESS OF BLADDER.

The second specimen presented by the President was a bladder with its hypertrophied prostate gland. The specimen presented some novel and interesting features as connected with diseases of the bladder and enlarged prostate. It was removed from a man 73 years of age, who was admitted to the Charity Hospital, August 14, 1873. There was nothing of special interest in the case until October 9th, when the patient began to grow feeble, and was soon confined to his bed. The usual method of treatment had been practised in the case, such as washing out the bladder, etc., and the patient had in this way been made comparatively comfortable. On 25th day of November he began to sink, and died on the night of the 28th of November. Just previous to death he complained of slight pain over the pubic region, but it was not thought to be very severe, for the reason that the patient mentioned the matter only once.

Post-mortem, performed the day following his death, revealed the usual condition of bladder seen in connection with enlarged prostate. The main point of interest was that the abdomen showed evidences of general peritonitis. There was considerable fluid and flocculent material in the cavity of the pelvis, darkish in color, and upon the right anterior wall of the bladder there was found a large abscess.

This abscess communicated with the bladder by two small openings. There was no communication between the abscess and the peritoneal cavity. It is probable that the abscess produced the localized peritonitis which resulted in general peritonitis. Pus had been present in the urine of the patient at different times preceding death, but for a few days before death the urine had been comparatively free from pus. About one month previous to death nearly three ounces of quite pure pus were obtained.

Dr. Post remarked, with regard to the first specimen presented by Dr. Mason, that tumors developed in the course of the large trunks of nerves are, as a rule, less painful than when connected with nervous filaments.

Dr. Post also inquired, in connection with the second case, whether at any time attempts had been made at catheterism, which would give rise to irritation, and was answered in the negative; and also that there was no lesion of the urethra or bladder other than those mentioned.

CASES OF CALCULI FROM BEIRUT.

The presentation of specimens having been concluded, Dr. Post read the following cases reported by Prof. George E. Post, M.D.:

Case I.—A chain of seven urethral calculi in the bulbous and membranous portions of the urethra.

A young sailor contracted gonorrhœa eight years ago. Since that time he has always had difficulty in the passage of urine, and has complained of burning and of the admixture of pus, and occasionally blood, with his urine.

He presented himself at the clinique of St. John's Hospital on account of a hard tumor, just behind the scrotum, in the anterior portion of the bulb of the urethra. This tumor seemed to the touch about the size of a filbert, and communicated a slightly gritty sensation on being rubbed. I passed sounds of various calibres from 12 to 4 to the seat of stricture, which was just in advance of the tumor, but failed to touch any calculous body. I then seized the tumor between the thumb and forefinger of the left hand, and cut down upon it in the median line, and discovered it to be a phosphatic calculus of the size and shape of a filbert. Its posterior facet was indented with a smooth facet, like the adjacent articular surfaces of two carpal bones, and in this facet was a small flattened cubical calculus of the size of a pea. The posterior aspect of this calculus had a similar facet connected with a third calculus, and by slightly enlarging the incision into the bulb, and introducing the left forefinger into the rectum, and pressing forward and upward from the prostate towards the bulb, I was enabled, with the aid of a director, to press and pry out six of the smaller calculi, which, with the larger anterior one, had formed a chain an inch and a half in length, occupying the bulbous and membranous portions of the urethra. The total weight was fifty-four grains. There was some hemorrhage, which was restrained by pressure, and by the application of liquor ferri perchloridi. After extracting the calculi I divided the structure into the wound.

Case II.—A young man, aged 20 years, had been cut for stone by the recto-perineal operation at the age of eight years. There remained a recto-vesico-perineal fistula from the time of the operation. At the age of 20 he applied to the clinique of the Hospital of St. John, at Beirut, on account of a tumor as large as a goose-egg in the perineum. On probing through the fistulous openings a large calculus was discovered. I at once cut down upon it in the median line, and removed an irregularly pear-shaped calculus three and a half inches in length, and one inch and three-quarters in diameter at the larger end. It was covered with facets, in which were lodged more than thirty smaller calculi, varying in size from a nickel three-cent piece to a grain of rice. Most of them were nummular in shape, and the nuclei were found to be, in every case, grape-seeds, which had passed from the rectum into the fistula, and lodged by the side of the calculus, and become the nuclei of cabulous deposits. The large sac which contained these stones was then dissected away, and only enough of its lining left to form a new urethra. The

anterior portion of the urethra, which from long disuse had become contracted, or rather the development of which from non-use had become arrested, was then divulsed by Perrevis' dilator, and the subsequent treatment as in cases of perineal section with extensive loss of tissue. Unfortunately the patient insisted on leaving the hospital before the final result of the operation was attained.

CASE III.—A man, 45 years of age, presented himself at the clinique of St. John's Hospital for vesical calculus. On making the usual incision for the bilateral operation, and reaching the membranous portion of the urethra, a pouch was felt at its junction with the bulbous portion, which, on being felt between the thumb and forefinger, communicated a grating sensation. It had not been detected by the sound. On laying it open a dozen calculi were evacuated, varying from the size of a lentil-seed to that of a pea. The prostate being incised, a somewhat larger number of calculi was withdrawn from the bladder. The patient had a speedy and perfect recovery.

The Society then adjourned.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, Jan. 15, 1874.

DR. AUSTIN FLINT, PRESIDENT, in the Chair.

TRANSFUSION.

THE subject presented to the Academy was that of "*Transfusion*," by Dr. Fordyce Barker. His remarks were accompanied by the exhibition of Aveling's instrument for Transfusion. The Doctor spoke substantially as follows:

The notion of transfusion of blood from one individual to another was entertained by the ancients. Ovid, in his Metamorphoses, refers to Media, the sorceress, as having power to rejuvenate old age, restoring to youth and vigor, by two processes; namely, by injecting into the veins the juice of certain herbs, and by injecting into the veins the blood of a young person. Practically, however, this experiment, so far as known, was never attempted by the ancients.

In 1657 Sir Christopher Wren, having made some experiments, suggested the possibility of the operation, in a communication which he made to the Royal Society of London in the same year.

In 1665 Dr. Lower experimented by transfusion of blood from one animal to another, and at about the same time Denys, of France, working independently, commenced a series of experiments of like nature. To Denys belongs the honor of being the first to perform the operation upon the human subject, which was done in the year 1666, and was a success. The operation was performed upon a young person who was sick with fever, and had been bled, vomited, and purged twenty-two times. The surface of the body was cold, the patient was pulseless, respiration was extremely rapid, mind delirious, etc., when Denys proposed transfusion, by which means he succeeded in restoring his patient and complete recovery followed. His second case was one of very similar character, and occurred in the person of the son of a Minister Plenipotentiary to Paris, who had been bled in the treatment for a fever until extremely exsanguinated. Transfusion was performed, and a similar success followed the operation. The results of these two operations gave rise to the most extravagant enthusiasm. It was alleged that the insane could be cured in this manner, and that the old could be made young. In the course of one year, however, so many fatal results had taken place, that the operation was interdicted by law, except as it was permitted by the Faculty of Paris. If that body granted permission, the operation could be performed.

From that time until 1685 the operation fell into disuse in all parts of the world. In 1685 Prof. Harwood, of Cambridge, commenced a series of experiments upon animals. In one of his experiments, which was performed upon an old horse, the animal is said to have raised up and commenced feeding.

In connection with a communication made by him to the Royal Society in England, a man by the name of Cogor consented to have the operation performed by taking the blood of a sheep, and it is reported that the man suffered no harm from the experiment. A second experiment was performed upon the same man, but no history of the result can be obtained. No attempt, however, was made to resort to this operation for the purpose of restoring life in desperate cases until 1819, when the experiment was revived by Dr. Blundell, of London. He commenced a series of experiments to determine what would be the results of transfusion of blood from a vigorous animal to one that was feeble and exhausted. His experiments were characterized by great research and great mechanical ingenuity, and he was the first operator to apply the measure for the saving of life in cases of post-partum hemorrhage. He resorted to the operation in six cases of post-partum hemorrhage, and for a time his patients rallied.

There was a marked improvement in the action of the heart and the respiration, but all of his cases terminated fatally. As far as I have been able to learn, the first case in which the operation was resorted to in connection with post-partum hemorrhage, in which the life of the patient was saved, was a case of Mr. Waller in the year 1859. His patient had suffered in the extreme from hemorrhage, when about ʒ ix. of blood taken from the arm of a healthy man were injected into the veins of his dying patient, and was followed by complete recovery.

In all these early cases the transfusion was indirect. The blood was first taken from the system of one person, drawn into a syringe, and then thrown into a vein of the person upon whom the operation was to be performed. At this time the subject had been taken up and examined with great zeal and industry by various German physiologists, and the results of their experiments seemed to prove that the cause of death in these cases was from coagulation of blood. It is to be remembered in this connection that at the time of those investigations the knowledge which we now have relative to thrombosis and embolism did not exist.

While the principle was recognized that blood could coagulate within the vessels, the true explanation was not understood, and different terms were employed to express the idea. In 1860 Prof. Martin operated upon one case, and succeeded in restoring the life of the patient. In 1861 he published a tabulated statement of 57 cases in which transfusion had been performed, and in which recovery took place in 45 cases. In all these cases transfusion was resorted to on account of post-partum hemorrhage. In connection with the fact that danger arose from coagulated blood, it was suggested that perhaps the operation would be rendered more safe if the blood was defibrinated; consequently subsequent experimenters were in the practice of defibrinating the blood by whipping it with a thin rod.

In 1860 Prof. Nusbaum performed the operation in connection with a case of disease of the knee-joint. His patient was so exhausted by the disease that resection of the joint could not be performed. Trans-

the operation the patient opened her eyes, consciousness was gradually restored, and recovery was complete. It is possible that in this operation we may yet find a method for successfully meeting this class of cases.

Dr. Peaslee suggested that a series of experiments should be performed to determine whether blood could be transfused with safety from animals of one species to animals of another species. In this manner, perhaps, it may be found that the blood from some species of animals can be introduced with safety into the human system.

In cases of exhaustion from profuse hemorrhage, in general, if life can be restored for twelve hours, the patient will probably be in such a condition that life may be saved. In cases of exhaustion depending upon the effects of disease, the repetition of the operation would probably become necessary, yet he saw no reason why patients could not be saved in that manner.

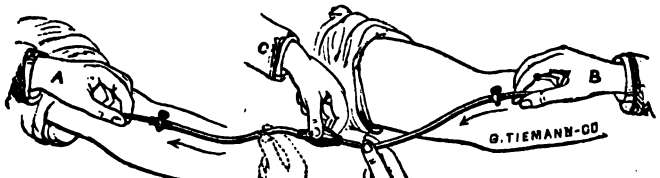
Dr. Flint, Jr., remarked with regard to the suggestion of Dr. Peaslee concerning experiments upon animals of different species, that the subject had already been fully investigated by physiologists, and it had been found that the introduction of blood from inferior animals into the circulation of the human subject is attended with very great risk. Very small quantities of blood from an inferior animal have been introduced into the circulation of the human subject without detriment, but the introduction of any considerable quantity would, without doubt, be an exceedingly dangerous experiment to perform. The experiment of introducing the blood of an animal having oval corpuscles into the circulation of an animal whose blood contained round corpuscles, has already been tried for the purpose of ascertaining, if possible, the length of time occupied by the oval bodies in making the round of the circulation. Experiments of similar nature have also been performed upon sheep and dogs, etc. In all these cases, however, death subsequently followed, which showed that the animal would not tolerate any considerable quantity of blood in the system that had been taken from one of another species.

New Instruments.

AVELING'S APPARATUS FOR IMMEDIATE TRANSFUSION.

The apparatus consists of the following: an India-rubber bulb, oblong in shape, and of sufficient size to contain two fluid drachms; India-rubber tubes six or seven inches in length attached to the extremities of the bulb; and stopcocks attached to the outer extremities of the tubes. Also, two silver tubes: one, bevel-pointed, called the afferent tube (seen at A), which is to be inserted into the vein in the arm of the patient; the other round-pointed, called the efferent tube (seen at B), which is to be inserted into the vein in the arm of the donor. Also, a pair of fine forceps and a scalpel.

The apparatus is represented in the wood-cut as being in position for the operation.



MODE OF OPERATION.

First, place the apparatus in a basin of tepid water, and, while completely under the water, for the purpose of filling it and insuring its cleanliness, compress and expand the bulb until the air contained within the bulb and rubber tubing is completely expelled. When the air has been completely expelled, and while the apparatus is yet remaining beneath the surface of the water, turn the stopcocks at both extremities of the rubber tubing in such a manner as to entirely preclude the possibility of air gaining access to its cavity. The patient having been brought to the side of the bed and the arm made bare, a fold of skin over a vein at the bend of the arm is to be raised, transfixed, and divided. The vein now brought into view is to be seized with the fine forceps, slightly raised, and a small opening made into it for the reception of the bevel-pointed silver or afferent tube. This tube, which has been lying in the basin of tepid water, should carefully be kept filled with water when it is removed, by placing the thumb or finger over its larger opening.

The tube, now being filled with water, has its bevel-pointed extremity at once inserted into the opening already made in the vein, and is then entrusted to the care of an assistant (A), who carefully compresses the edges of the wound around the tube, and at the same time holds his thumb or finger over its larger opening to prevent the escape of the water.

While the operator is performing this part of the operation, an assistant should prepare the arm of the blood-donor in the same manner as for venesection. An opening is then made into the vein, and the round-pointed or efferent tube at once inserted with its point towards the fingers. The donor should then be seated in a chair at the bedside of the patient. It is better not to secure the tubes in the veins by ligatures. B represents the hand of an assistant holding the efferent tube carefully compressed within the lips of the wound, in the same manner as with the afferent tube at A.

The India-rubber portion of the apparatus, thoroughly cleansed, air perfectly expelled, and completely filled with water, is now to be carefully and closely adjusted to the two tubes in the veins. When adjusted, the stopcocks are turned straight, and transfusion is commenced by first compressing the India-rubber tube on the efferent side (donor's) and then squeezing the bulb which forces two drachms of water into the afferent vein. Next, while the bulb is compressed, shift the hand and compress the India-rubber tube upon the afferent (patient's) side. Then allow the bulb to expand slowly, and blood will be drawn into it from the donor's vein. When the

tubing and bulb are filled, bring the hand back, compress the tube, follow this by compression of the bulb, and two drachms of blood will be thrown into the afferent vein. In this manner the process can be repeated any number of times desired, rapidly or slowly, and the exact amount of blood transfused can be known by counting the number of times the bulb has been emptied, and subtract one, which accounts for water first used.

The advantages claimed for this method of transfusion are:

(1.) The chances of coagulation are small, because the blood is removed from the action of the living vessels for only a few seconds, and glides smoothly through the India-rubber without being exposed to the air.

(2.) The apparatus is effective, simple, portable, inexpensive, and not likely to get out of order.

(3.) The operation is safe, easy, uninterrupted, and a close imitation of nature.

Medical Items and News.

HENRY BAYLIS, M.D., who died recently at Mount Hope, Bristol, L. I., was a son of Dr. Gustavus Baylis, who fought in the Revolution, and was army-surgeon during the War of 1812. After graduation at the College of Physicians and Surgeons, he practised successfully in this city fourteen years. He took a leading part in founding the New York Lying-in Asylum, and was attending physician thereof for eight years. Dr. Baylis was an excellent physician, a good citizen, and a generous, noble-hearted man.

FRANCIS MARKOE WRIGHT, of Englewood, N. J., died on Monday, March 16, 1874.

LEGALIZED DISSECTION.—Judge Pratt rendered the following decision on the mandamus obtained by counsel for the Long Island College Hospital compelling the Coroners to show cause why the unclaimed bodies at the Morgue should not be given up for medical purposes:

In the matter of the Long Island College Hospital against the Coroners of the City of Brooklyn, and the keepers of the Morgue of the said City of Brooklyn: On reading and filing the affidavits of Samuel G. Armor, A. J. C. Skene, and A. H. Bates, members of the Faculty of the said Long Island College Hospital, and the order to show cause herein, dated March 11, 1874, and after hearing Daily & Brower, attorneys for the said Long Island College Hospital, and Thomas H. Rodman, District Attorney of Kings County, for the said Coroners and keepers of the Morgue:

Ordered—That the said Coroners of the City of Brooklyn, and the keeper of the Morgue of the said city, be and are hereby ordered to deliver up to the Professors and teachers, on an order of the Dean of the Faculty of the said Long Island College Hospital, the remains or body of any deceased person, for the purpose of medical and surgical study, provided that said remains shall not have been regularly interred, and shall not have been desired for interment by any relative or friend of said deceased person within twenty-four hours after death; provided also, that the remains of no person who may be known to have relatives or friends shall be so delivered or received without the assent of said relatives or friends, and provided that the remains of no one shall be so delivered or received who has been detained for debt, or as a witness, or on suspicion of crime, or who shall have expressed a desire in his or her last sickness that his or her body may be buried, but such remains shall, in the cases specified in this proviso, be buried in the usual manner; and provided, also, that in case the remains of any person so delivered or received shall not be subsequently claimed by any surviving relative or friend for interment. And the said College shall decently bury, in some public cemetery, the remains of all bodies after they shall have answered the purposes of study, as aforesaid.

ANNUAL REPORT OF THE SUPERVISING SURGEON OF THE MARINE HOSPITAL SERVICE OF THE UNITED STATES, for the fiscal year 1873. Washington: Government Printing Bureau, 1873.—This is the second of the series of reports made by Dr. John M. Woodward since his accession to the duties of Supervising Surgeon of this bureau, and, in even greater degree than the one preceding it, does honor to his judgment. Following the customary statistical report and a comprehensive statement of the laws and regulations governing the service, is an appendix embracing one hundred of the one hundred and fifty pages of the work, and composed of essays of considerable interest to the profession, the most important being an article on "Hospitals and Hospital Construction," by Dr. Woodward; "The Natural History of Yellow fever in the United States from 1668 to the Present Time," by J. M. Toner, M.D.; The Reports of the Marine Officers on the Yellow Fever Epidemic of 1873; "The Sailor and the Service at the Port of New York, by Heber P. Smith, M.D.; and River Boatmen of the Lower Mississippi, by Orasmus Smith, M.D., of New Orleans. A singular case of double diaphragmatic hernia is reported by Thos. T. Minor, M.D., and illustrated by a photograph, and Dr. C. N. Ellinwood contributes an article on urethral stricture.

The necessity for a marine hospital at this port it is proposed to meet by the construction of the requisite buildings on an artificial island to be located on Oyster Reef, in New York Bay, south of Bedloe's Island. The articles relating to the condition of sailors in this port, and the Mississippi boatmen, are of very general interest, and cannot fail to make a strong appeal for the passage of laws which will ameliorate the condition of these classes.

VETERINARY SURGERY IN FRANCE. — The *Recueil de Médecine Vétérinaire* publishes some interesting details on the present state of veterinary studies in France. There exist three schools of veterinary surgery, one near Paris, at Alfort, a second at Lyons, and a third at Toulouse. They include a total number of 665 students, forty of whom belong to the army, and are supported by the government. Among the total number are 238 students, the expenses of whom are half paid either by the government or provincial departments. The cost of the three schools to the government is about 663,000 francs, 298,000 francs of which are covered by the receipts. The present state of the schools is said to be most flourishing.—*The Lancet.*

JEAN CRUVEILHIER.—A Paris telegram announces that Jean Cruveilhier, the eminent physician, is dead. This venerable man was born at Limoges in 1791, studied under Boyer and Dupuytren, and became attached to the faculty of Paris in 1825. He reorganized, in 1826, the old Anatomical Society which had been founded in 1769 by Dupuytren, and was in succession physician to three of the principal hospitals in Paris. In 1841 he completed his great work on pathological anatomy, forming two large volumes. He also

wrote a book on descriptive anatomy, and one on the anatomy of the nervous system. M. Cruveilhier was appointed a commander of the Legion of Honor in 1869.

UNIVERSITY OF PENNSYLVANIA.—One hundred and twenty-one students have just graduated from the medical department of the University of Pennsylvania. Eighty-one also graduated from the College of Pharmacy.

INCREMATION AND URN-BURIAL.—Prof. Brunetti (*Rev. Scientifique*, Nov. 22) gives the details of the apparatus that would be required for the process of incremation. After having made several experiments on the human subject, in which the bodies were burnt in the retorts of gas-manufactories in closed receptacles, and with free access of air, he first satisfied himself that the complete and perfect performance of the process would be impossible under all ordinary conditions. In the first place, there is required an oblong furnace of fireproof bricks, having ten holes below, by means of which the intensity of the fire can be regulated. The upper part of this should be hollowed to receive the coffin, and over this a domed cover is to be placed, by which the flames, as in a reverberatory furnace, may be directed upon the body. Within the coffin is a metal support, or table, on which the body rests, fixed by thick iron wire. The operation embraces three periods—the heating of the body, its spontaneous combustion, and, finally, the incineration of the soft parts, and the calcination of the bones.

During the first period, and about half an hour after the pile of wood within the furnace has been lighted, the combustion of the body commences. It gives off a large quantity of gas, and the management of the reverberatory part of the furnace is of great importance.

During the second period, the spontaneous combustion of the body takes place, which, M. Brunetti remarks, produces a profound impression on the mind —"impression toujours l'ésprit et vous rends pensif."

If the wood has been well arranged, two hours suffice to produce complete carbonization. During the third period, the air-holes being opened, the carbonized mass is collected and placed upon a fresh plate, and the heat is now urged to the utmost, a fresh supply of wood being inserted. By means of this arrangement, at the expense of about 150 pounds of wood, complete incremation—that is to say, incineration of the soft parts and calcination of the bones—may be effected in two hours. When the furnace has cooled, the cinders and bones are collected and deposited in a funeral urn. Prof. Brunetti found the body of a woman, aged thirty-five, weighing about one hundred and ten pounds, reduced to about four and a half pounds. A man of forty-five, weighing about ninety pounds, was reduced to less than two and a half pounds.—*The Lancet.*

GENERAL ELECTRIZATION IN GERMANY.—Beard and Rockwell's work on Medical and Surgical Electricity has recently been translated into German by Dr. R. Väter of the University of Prague.

The translator, in his preface, after giving his reasons for translating the book—that it contained the essence of all previous works on the subject and was especially conspicuous for the truthful delineations of their cases and for clear explanations of the physical and physiological relations of the subject—thus speaks of their method of general electrization:

"A part of the work is given to general electrization, which is useful for the special as well as the general practitioner. Although general electrization had been used before by some electro-therapeutists, yet to Beard and Rockwell belongs the credit of having given it a scientific basis and reduced it to a system. Of the advantages which may be derived from this method I have thoroughly convinced myself. I can therefore conscientiously recommend the employment of general electrization in very many cases."

NEW YORK HOSPITAL.—The Governors of the New York Hospital have purchased the "Thorne" mansion in West Sixteenth st. According to *The Evening Post*, it is on the south side of Sixteenth st., between Fifth and Sixth avs., extending through to Fifteenth st., and comprising eight full lots, of which five are on Sixteenth and three are on Fifteenth st. The house is about 66 by 80 feet, and three stories in height. In the rear of this the Special Committee recommend the erection of a reception hospital for acute surgical and medical cases, with a capacity of from 50 to 90 beds. They estimate the cost of the hospital building at $170,000, of its furniture at $20,000, and of the engine house, laundry, and vaults at $30,000. The probable yearly expenses of the reception hospital were estimated at about $40,000. The recommendations of the committee were unanimously adopted by the Board of Governors, and the Thorne property was secured for $20,000. The first floor of the house will be used for offices; the second for the library and pathological cabinet; the third floor for the hospital staff, and probably some private wards. Possession will probably be obtained about April 1st. Additional ground in the vicinity will probably be obtained.—*Tribune*, March 18.

THE ALUMNI ASSOCIATION OF THE UNIVERSITY OF PENNSYLVANIA.—The election for Officers for 1874 resulted as follows: *President*, Geo. B. Wood; *Vice-Presidents*, Joseph Carson, Geo. W. Norris, Isaac Hayes, Meredith Clymer; *Treasurer*, R. E. Rogers.

NEW YORK SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—At a Quarterly Meeting of the Board of Managers, held March 18, 1874, Dr. William Cockcroft and Dr. Robert G. Remsen were elected Managers, to fill vacancies in the Board occasioned by the deaths of Drs. Underhill and Roberts.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from March 5, 1874, to March 18, 1874.

RANDOLPH, Jno. F., Surgeon.—Relieved from duty with Sioux Expedition. S. O. 35, Department of the Platte, March 11, 1874.

BILL, J. H., Surgeon.—Granted leave of absence for 30 days. S. O. 55, Military Division of the Atlantic, March 12, 1874.

BREWER, Jno. W., Assistant Surgeon.—Assigned to duty as Post Surgeon at Fort Warren, Boston Harbor. S. O. 49, Military Division of the Atlantic, March 5, 1874.

GARDNER, W. H., Assistant Surgeon.—Assigned to duty at Fort Union, N. M. S. O. 34, Department of the Missouri, March 5, 1874.

O'REILLY, R. M., Assistant Surgeon.—Assigned to duty with Sioux Expedition. S. O. 35, c. s., Department of the Platte.

CLEARY, P. J. A., Assistant Surgeon.—Assigned to duty at Camp Supply, Indian Ty. S. O. 34, c. s., Department of the Missouri.

MUNN, C. E., Assistant Surgeon.—Assigned to temporary duty at Fort Independence, Boston Harbor. S. O. 49, c. s., Military Division of the Atlantic.

Original Communications.

ON HÆMOPTYSIS.

By JAMES R. LEAMING, M.D.,

ONE OF THE VISITING PHYSICIANS TO ST. LUKE'S HOSPITAL, N. Y.

(A paper read before the Medical Library and Journal Association, N. Y.)

Hæmoptysis may be divided into two kinds, according to the source of the hemorrhage. It may be simply an exudation through the bronchial arteries and mucous membrane—bronchorrhagia—or it may come from some open branch or branches of the pulmonary artery—pneumorrhagia.

These sources, though both in the respiratory system, are yet widely different in their origin, and the hemorrhages differ equally in their character, significance and danger. One comes from the systemic circulation, the other from the pulmonic. One signifies obstruction in the capillary circulation within the lungs; the other that there is destruction of lung substance. One is not necessarily attended with danger, the other threatens instant death. Different and yet similar as are these two varieties of hemorrhage, they are both described to the popular mind rightly enough by the common term "bleeding at the lungs," a phrase which conveys to the people only an idea of horror. The few cases of sudden death from hemorrhage of the lungs are published far and wide, and are ever remembered. When one spits blood, it is but natural that all interested should fear that his may prove one of the fatal cases. Public fear, as well as other forms of public opinion in regard to medical subjects, have their origin in the profession. Through the profession we hope to so instruct the common mind as to prevent unreasoning fear, and in this way it seems possible we may save many valuable lives.

Only a small number of cases of blood-spitting are fatal of themselves, and yet many of them, otherwise without danger, are the beginnings of fatal illness, because of the fright which they induce and of the wrong treatment of which they are the occasion. The anatomical explanation of these facts is the key to our comprehension of the whole subject. The bronchial mucous membrane, as well as the fibrous sheaths of the bronchi, are supplied with blood by the bronchial arteries, which blood is returned by the bronchial veins, and, so far, the analogy of this circulation to that of the body is maintained. But, in addition to this, there are in the lungs arteries arising from the bronchial perhaps receiving supplies also from the intercostal and the mammary. These arteries go to the parenchyma of the lungs, and are the proper nutrient vessels of the true respiratory system. ("Waters on the Human Lung"—Reissiessen, Cammann, etc.)

In this place it is not necessary to show that they alone provide nutrient blood for the whole true respiratory system which may be in part fed from the aerated blood of the capillaries and venous radicles of the pulmonary artery and vein. The exact truth on this subject will probably never be known. The singular fact remains that these nutrient arteries have no venæ comites. Their blood makes a short cut, as it were, through the capillaries of the true respiratory system, and becomes aerated even while doing its work, and is then passed immediately into the radicles of the pulmonary vein, never going through the right heart at all, and may be said never to have left the systemic circulation. This anomalous fact in the vascular anatomy of the respiratory system explains how bronchorrhagia may be caused by obstruction of the pulmonary circulation. Blood hindered or arrested in the pulmonary capillaries obstructs the blood in the nutrient arteries. These having no veins accompanying, are dammed up and the blood is thrown back into the bronchial arteries; and these again relieve themselves from the accumulation by straining it through their own vascular walls, and hence this is called bronchorrhagia. This form of hæmoptysis is a safety-valve arrangement, and its great object seems to be to prevent injury to the true respiratory portion of the lungs. It not only prevents immediate injury, it does more; it stimulates the organic life of the true respiratory system, and the absorbents take up and carry off the obstruction, whether it be plastic exudation upon the pulmonary pleura, or tubercle in the air-sacs. Bronchorrhagia may arise from two kinds of pulmonary obstruction—from that which is temporary and extrinsic to the pulmonary circulation and also from that which is more permanent and which has its seat *in* the respiratory system. The first cause, or extra pulmonic, may be from cardiac disease, hysterical passion, great emotion, or extraordinary exertion. The second is from obstruction to the circulation through the pulmonary capillaries, as by plastic exudation upon the pulmonary pleura, tubercles in the air-sacs, vesicular emphysema, cirrhosis of the lung, cancer or benign tumor.

Plastic exudation within the pleura is a frequent and too generally an unrecognized cause. The physical signs of plastic exudation have either been called subcrepitant—sometimes mucous râles, or such as were supposed to indicate capillary bronchitis, or œdema of the lungs. I shall not here attempt any discussion of these points, as that has been partially done in a previous paper (Dr. Brown-Séquard's *Archives of Scientific and Practical Medicine*, March, 1873), but shall merely state that in bronchial hemorrhage, it is practically safer to consider these râles as always indicating plastic exudation within the pleura, notwithstanding any predetermined views that may be held upon this subject. This is not unimportant, nor is it intended to bar discussion, as will be obvious, it is hoped, when we come to speak of treatment. The rationale of this cause may be readily understood if we consider that plastic exudation upon the pulmonary pleura, in addition to the pressure caused by its presence, soon applies that cause effectually by its contraction, and so obstructs the circulation of the pulmonary capillaries immediately subtending the pulmonary pleura.

Tubercle and its inflammatory results are important causes of bronchorrhagia, the more especially as the hemorrhage may draw *early attention* to the disease, which might otherwise have remained latent until softening and disintegration of tissue had commenced. There is no controversy as to the importance of early knowledge of tuberculosis, nor as to its correct management from the beginning. Gray tubercle—Bayle's tubercle—*true tubercle*—may be so deposited as to obstruct the pulmonary circulation without furnishing physical signs, except such as are obscure to the general observer and liable to misinterpretation. The expert auscultator can alone read them with certainty. In both tubercle and plastic exudation within the pleura, the capillary circulation of the true respiratory system is impeded. Hemorrhage relieves not only the immediate circulation, but it also stimulates the absorbents to remove the obstruction, whether it be tubercle or plastic lymph. From a pretty long observation of clinical facts, I feel warranted in stating my conviction that I have witnessed this conservative process in not a few cases. The thorough-

ness of the cure may depend upon the promptness and amount of the hemorrhage. This is especially so in first attacks.

When either of the important causes named are complicated with inflammatory products in the pleura or in the lung, the results of older disease, the removal of these products may not be so complete; yet even then a large hemorrhage may do very much to clear them away.

Vesicular emphysema gives rise to another variety of obstruction to the capillary circulation in the lungs. The true respiratory system consisting of bronchioli, infundibuli and air-sacs becoming dilated, bronchorrhagia sometimes follows. The obstruction to the capillary circulation in this dilated state of the true respiratory system results from the elongation and narrowing of the capillaries, so that the blood flows slowly or not at all. In old cases of emphysema some of the air-sacs become destroyed, which still farther interferes with the circulation, both in the pulmonary and nutrient arteries, but with less liability to hæmoptysis, as the system, in old cases, becomes accustomed to the crippled condition, and accommodates itself to it.

Cirrhosis of the lung is another variety of structural change, frequently accompanied by hæmoptysis. It commences generally in childhood or early life, and this history assists in making a correct diagnosis. The similarity of its physical signs to those of phthisis in the third stage makes it necessary that we should treat of it somewhat particularly. In both, there are dulness under percussion, cracked-pot sound, and cavernous respiration, which, if in the upper part of the lung, are sometimes accompanied by mucous gurgling. There will be also in both cases absence of true respiratory murmur, altered and exaggerated broncho-respiratory murmur, and there may be bronchial or tubal breathing. There may be also these rational signs in common:- hæmoptysis, cough, expectoration, and dyspnœa. They differ in history and in many of the rational signs. Hectic, loss of strength, night sweats, emaciation, and disease or disorder in other organs, liver, stomach, etc., all belong to phthisis, but not to cirrhosis. In phthisis the amount of circulating blood gradually diminishes, not so in cirrhosis; there is no cachexia in cirrhosis, but it is generally marked in phthisis. Yet the diagnosis of cirrhosis, during an attack of hæmoptysis, must be difficult. A few hints may assist in differentiation. The cavities in cirrhosis are always of moderate size and regular shape, and consequently the cavernous respiration is smoother in character and softer in quality than that formed in the irregular excavations of phthisis. The sound runs along the open bronchus each way in cirrhosis more readily, and is conveyed farther from the cavity than in phthisis. The condition of the digestive organs, fulness and vigor of the capillary circulation, but above all, the history of the long continuance of the case, enables us to make a correct diagnosis. The pathogenesis of cirrhosis is considered to be as follows: inflammation of the bronchial mucous membrane extends to the enveloping fibrous sheath, and interstitial plastic exudation takes place, which, contracting, results in stricture of the bronchus, and dilatation follows behind the stricture. In new attacks of bronchitis, plastic matter is thrown outside of the sheath, enveloping and destroying some of the air-sacs and bronchioles. As the child grows older, the physical signs give evidence of cavities and consolidated lung. This condition of the bronchi becomes more or less complicated with plastic exudation within the pleura, which, suddenly interfering with the capillary circulation of the peripheral air-sacs, may be followed by bronchorrhagia.

Cancer and benign tumors within the chest may also cause hæmoptysis by mechanical pressure, obstructing the pulmonary circulation. But the cases are rare, and it is not necessary to dwell upon them, for, if there be obscurity at first in the physical signs, the rapid progress of malignant disease soon renders the diagnosis clear.

Pneumorrhagia.—The second grand division of this subject is important on account of its great fatality. Fortunately its class is small, yet the terror which it excites is not unlike that produced by the cry of fire in a large assembly, jeopardizing many more lives by the fright and insane action which it induces, than by any intrinsic danger in the thing itself. Pneumorrhagia implies an open branch of the pulmonary artery. For practical purposes we shall consider it merely as the effect of erosion from disease, presupposing a cavity to have been formed. Yet, even in the third stage of phthisis, pneumorrhagias are rare among the number of hemorrhages. Pneumorrhagia is possible after the rapid formation of a cavity, and becomes probable if the cavity be near the root or centre of the lung, where the vessels are large and abundant. The rapid disintegration of tissue renders the branch of the pulmonary artery which passes across or through the decaying mass liable to morbid change, which may take the form either of disruption, resulting in sudden death, or, by shrinking up, become impervious and so remain for years. It is then a matter of great moment to watch the formation of cavities, in what may be called a dangerous position, and to so guard the patient during the unavoidable process as to render this accident of minimum probability. Severe coughing should in such circumstances be allayed by opiates, which before perhaps had been avoided. Exertion and emotion should not be permitted to unduly distend the pulmonary vessels. Small blisters may be constantly changed from place to place over and around the forming or formed excavation, in order to glue the pulmonary and costal pleura together, preventing motion in that portion of the diseased lung long enough for a clot to be firmly formed in the artery. Nature sets us the example, for no cavity appears near the surface of the lung, but that its immediate vicinity is bound down by adhesions. Reisseisen, Marshall, Hall and others, taught that the anastomosis of the pulmonary arteries was general and free. Dr. Cammann (*N. Y. Med. Journal*, 1848), in his experiments, by a series of injections into the blood-vessels of the lung of the sheep, proved clearly that this was a mistake; that instead of there being free anastomosis, there is properly none at all. Each lobulette is a complete type of the lung and has no anastomotic connection with any other part, so that, ordinarily, cavities in phthisis, gangrene or abscess, are rarely accompanied by pneumorrhagia, and only so by the accident of their opening a branch of the pulmonary artery. If the cavity just formed is centric, with no pleuritic adhesions, the rational signs may have been so slight as not to have drawn attention. The patient may be in attendance upon ordinary duties when the first mouthful of blood is raised. A lady-teacher in one of the public schools is standing before her class, giving instruction, when she raises a mouthful of blood, and immediately retires to a side class-room; the blood pours from her mouth and nose and she falls to the floor, and is dead before a messenger can be despatched for help. A gentleman in his bed-chamber touches the bell, and comes to the head of the stairs with a vessel in his hand, and calls to the family that he is spitting blood, and desires a physician. They hasten to his assistance, but he has fallen upon the floor and is dead when they

reach him. Sudden deaths from pulmonary hemorrhage are rare, but they sometimes occur. Other cases of pneumorrhagia are not so immediately fatal; there may be several attacks before the patient succumbs. The cavity may be small, and the open branch small, or the motion in the diseased lung may be resisted by pleural adhesions. In the latter case it is possible the hemorrhage may be arrested permanently. A clot forming in and filling a cavity in a portion of lung restrained from motion, may remain there long enough for the eroded artery to shrink and become impervious. But even if the cavity be small, and the arterial branch small, the frequent recurrence of hemorrhages may finally exhaust the patient. This form of hemorrhagia may be mistaken for bronchorrhagia occurring after extensive plastic exudation within the pleura. But with the absence of cavernous respiration or signs of consolidation of the lung, and with the presence of plastic or subcrepitant râles, the diagnosis need not be uncertain.

Diagnosis.—It needs no argument nor farther accumulation of evidence to show the great value of a clear and correct diagnosis in hæmoptysis. It is of the first importance to diagnosticate between bronchorrhagia and pneumorrhagia. In a large proportion of cases the medical attendant may state in the most emphatic manner that there is no danger, and refuse useless or harmful medication. His presence and the confidence which he inspires relieves apprehension and fright, and by wise advice he may prevent serious consequences. The chances are—perhaps a thousand to one—that a case of hæmoptysis is bronchorrhagia. It is best to assume this until a certain diagnosis proves the contrary—which turns on the presence of cavities and consolidation of pulmonary tissue. If there be no cavernous respiration and no evidence of consolidation and in addition, if respiratory murmurs can be heard throughout the lungs, it is clear that there can be no cavities. This determines definitely for the larger number of cases, and those not thus determined may be classed as doubtful in virtue of the same negative evidence. By farther examination we may satisfy ourselves, almost with certainty, that a large majority of these also are cases of bronchorrhagia. If the walls of the cavities are hard and unyielding it amounts almost to a demonstration that the hemorrhage is not pneumorrhagia, for the hardened walls are a sign that the cavities are old, and the branches of the pulmonary artery that traverse them are probably impervious. If cirrhosis of the lung be diagnosticated, it is certain that the hemorrhage cannot be pneumorrhagia. When a cavity is forming, or has just formed, without previous disease in that portion of the lung, if the position be central, the progress of the disease rapid and the lung free in its motion, not held by adhesions, the danger from pneumorrhagia is imminent and should be guarded against.

Treatment.—Pneumorrhagia may be so speedily fatal that there will be no time for ordinary remedial measures. It has been suggested that it might be possible to arrest hemorrhage from the lungs likely to be fatal by standing the patient upright until syncope should take place, and then placing him in a recumbent position, so that a clot might form in the cavity. I am not aware that this plan, which certainly has plausibility to recommend it, has ever been intentionally tried in practice. But we know that some of the patients were standing upright when the bleeding began, and fell from exhaustion or syncope, and so had the advantage of this hypothetical method without avail. The appalling cases of pneumorrhagia arise from central cavities of large size and from the erosion of a large vessel. Should a clot even be formed and the patient recover from syncope, the unhindered motion of the free lung would soon dislodge the clot, and the hemorrhage would again commence. Unfortunately the history of these cases shows that they are too speedily fatal for a clot to form. In a small cavity or in a smaller open vessel there is more likelihood of the formation of a clot, and the temporary arrest of the hemorrhage. But even here, when the cavity forms in the centric or dangerous locality, the clot is soon dislodged and the bleeding recommences, and this alternation continues till the patient sinks exhausted. In this variety of pneumorrhagia, however, there is time for something to be done; the danger is from recurrence of bleeding by displacement of the clot. If this can be prevented long enough the vessel may become impervious and immediate death be avoided. There can be no hope to fill the indication but by mechanical interference; medicines have no power over open vessels in the centre of the lung. Our experience suggests that nature has here pointed the direction that our endeavor must take to afford any hope of success. Motionless lung alone can permit the closing of the vessel. Nature secures this condition by adhesions—we can in some degree imitate her by transfixing the lung in the diseased part, thus holding it still till the danger is past. Needles of platina or gold, passed from different points through the lung, may successfully prevent motion, and they might remain, doing no serious injury, until inflammatory action should be set up, and thus effectually prevent a recurrence of hemorrhage. Or the needle of the aspirator could be passed into the cavity and an injection of a drop or two of liquor ferri per sulphatis or other powerful styptic could be thrown in, which would form a firm clot in the open vessel as well as in the cavity, and the hemorrhage be permanently arrested. This presupposes an accurate diagnosis of the *position* of the cavity. As before said, fatal pneumorrhagia is not likely to occur near the surface of the lung, where the contiguous pleura is bound down by abundant adhesions, and it is a wise precaution to frequently apply small blisters over and around forming or recently formed cavities. This measure not only guards against pneumorrhagia, but it prevents a cavity discharging its contents into the pleura, causing hydro-pneumo-thorax. Effusion of serum into the pleural cavity arrests pneumorrhagia by mechanical compression, in the same way as we sometimes see it crush out pneumonia. This condition might be artificially produced by pumping water into the pleura. Ligaturing the limbs with a tourniquet or strap is easily performed, and it is a practical and frequently used method of arresting hemorrhages, for it prevents the return of venous blood to the right side of the heart and temporarily relieves the pressure on the pulmonary circulation. The hemorrhagic act is preceded and accompanied by an eager hastening pulse-beat which the medical observer soon recognizes, and advantage may be taken of this monition to gain time for the application of mechanical means. If some of these means suggested seem to be harsh, farther consideration will show that they are not so in reality, and it must be remembered that the occasion is desperate and none other are of any use or promise any hope. Medicines given by the mouth, or otherwise, can have no control over a bleeding artery in the centre of the lung.

In bronchorrhagia there is no danger of sudden death, and consequently there is time to select the best methods of treatment. When the cause is extrinsic to the lungs the remedy should be to the cause and not to the symptoms. In hysteria the treatment should be to the disease, and the same in cardiac affections. The

hemorrhage *per se* gives relief, and when left to itself it may be safely said is never other than beneficial. After an hysterical hemorrhage from the lungs, which may have produced alarming fright in the bystanders, the patient may fall into a gentle and placid sleep, from which she awakes relieved.

Bronchorrhagia arising from obstruction to the pulmonary circulation from a diseased heart must be treated by paying attention to the heart alone, endeavoring to give it force and power to equalize the circulation. Stimulating enemata, brandy by the mouth, mustard foot-baths, the sedative action of calomel, digitalis and nux vomica, may relieve the heart from its oppressed condition and the hemorrhage will cease naturally. Bronchorrhagia resulting from obstructed pulmonary circulation, caused by plastic exudation upon the pulmonary pleura, is of more frequent occurrence than any other, and its mismanagement may be followed by the most serious consequences. The lung oppressed by the presence of plastic exudation is more and more crippled by contraction. A large hemorrhage at the beginning is frequently followed by the immediate removal of the cause. Attempts to arrest this hemorrhage are generally futile, but the evil results of the methods used and the delay in applying proper remedial measures may end in what is popularly known as "hasty consumption." The old custom, lately reinstated by the translation of a popular German text-book, is to place the patient in bed in a semi-recumbent position, to direct that he be kept quiet, to speak only in whispers, not to cough, to darken the room, and prevent all motion that may be avoided. In addition to this medicines are given *to stop* the hemorrhage, as, acetate of lead, opium, kino, tannic acid, gallic acid, mattico, ergot, spirits of turpentine, and table-salt. In spite of all this treatment and mismanagement the bleeding continues more or less at intervals, causing prostrating fear to the patient and agony to the loving attendants. This may go on for days or weeks, until nature, giving up the contest, the bleeding may cease, only to be followed by disintegration of tissue, rapid tuberculosis, and death. An entirely opposite treatment might have saved life. But instead, the effort of nature is thwarted and rendered of no effect. The threatening conditions, which she would have changed if she had not been prevented, are carefully preserved, and in addition to all this the exuded blood is kept in the bronchi decaying and offensive, causing local inflammation and general depression. Medicines which do harm to the patient, and do not arrest the bleeding, are resorted to, while all that should be done is left undone. It is no wonder, viewed in this light, that "hemorrhage causes phthisis;" would it not be better to say, rather, that the physician cultivates phthisis? As illustrating the possible consequences of repressing all effort to relieve the clot in cases of hemorrhage, there is an instructive case in Graves, who reports the incident of a gentleman who had several hemorrhages in one day and was visited by Dr. Stokes, who found him collapsed (he had also been bled from the arm) and well-nigh asphyxiated; the right side of his chest was expanding and contracting energetically, the left almost fixed and motionless. Dr. Stokes changed his position and gave him a glass of wine, when he made an effort and violently expectorated a fibrinous coagulum, forming a complete mould of the left bronchus and its ramifications. Loevenhard, quoted by Valleix, cites a case of a woman to whom alum had been administered in hæmoptysis with the hope of arresting the hemorrhage, and apparently with effect, but upon the cessation of the bleeding, suffocation became imminent; and from this danger the woman was only relieved by the rejection of a large quantity of coagulated blood.

What then should the physician do when called to a case of this nature? His first determination should be *to do no harm*. He should by his cheerful, confident demeanor, inspire the patient and friends with his own courage. Then after auscultation and the diagnosis of bronchorrhagia, he should insist upon the patient's speaking aloud, that he should breathe freely, sit up, walk about, cough and expectorate all the blood he can. There is no danger of increasing the hemorrhage by coughing, loud speaking, and full respiration; these acts merely help to loosen and dislodge the blood already exuded into the bronchi and which is there obstructing respiration. It should be the object of the treatment to expel all the exuded blood, before any part of it becomes putrid. Clearing out the bronchi and full respiration do not increase the exudation; on the contrary these healthful acts go far to equalize the circulation and help to arrest farther hemorrhage. Salt and spirits of turpentine are innocuous, but do not let the patient believe that they are given for the purpose of arresting hemorrhage; it is best to stand firmly upon the ground that the hemorrhage is beneficial and should not be arrested. On this account we should refuse any medication, for, if the bleeding does not soon cease, the patient begins to lose confidence in the doctor's ability to arrest it, which may be calamitous. The confidence inspired by the presence of one believed to have power to help us, gives tranquillity of mind and that steady, nervous action which, operating directly on the heart, equalizes the circulation; the cold extremities become warm, the oppressed breathing becomes free, and these facts prove that the pulmonary congestion or stasis is relieved. Many remedies have gained reputation for power they did not possess, *by the real power* of a trusted physician's presence, acting through the emotions upon the organic life of the body. As soon as a diagnosis can be made between plastic exudation and early tuberculosis, a line of treatment should be adopted not "to cure the bleeding" but to remove the cause. In both plastic exudation and early tuberculosis all the special treatment should be the same. The lungs should be frequently and systematically expanded, as much fresh air should be inspired as the system will accept. The diet should be nutritious, not overstimulating, but such as is known to be most beneficial in tubercular phthisis. If plastic exudation should be diagnosticated by finding persistent, subcrepitant or mucous râles, soft-tearing and near the ear, without dulness of the percussion note, its early removal would be an object of the highest importance. Nothing helps us in this object more speedily, perhaps, than the bleeding itself, and for this reason we should not arrest it, even were it within our power to do so. The beneficent and harmless action of calomel when used for its sedative effect, in cases of commencing or threatened inflammation, is not so well known as it deserves to be. In "Graves' Clinical Medicine" (pages 803–806 inclusive, ed. 1843, Dublin) its qualities and capabilities are well set forth. In Dr. Lente's paper (*N. Y. Jour. of Med.*, May, 1869) its successful and safe application in dysentery and some other inflammations is ably maintained. In recent plastic exudation, followed by hemorrhage, its beneficent and prompt effects are more remarkable than they are in any other inflammation. It wipes out, as it were, all evidence of disease, the hemorrhage ceases, the subcrepitant and mucous râles disappear in an incredibly short time, leaving the patient well. It has been un-

fashionable of late years to speak of calomel and bleeding as proper remedies in any case. No doubt they have been abused, and so too have many other good instruments which have not been discarded.

Above all other things it is important that specifics or styptics, of whatever name or character, especially those that may depress the vital power or derange the digestive organs, should be *withheld* in bronchorrhagia. Our one object should be to remove the cause.

THE ELECTROLYTIC TREATMENT OF CANCER.

By A. D. ROCKWELL, M.D.,

ELECTRO-THERAPEUTIST TO THE N. Y. STATE WOMAN'S HOSPITAL.

(Read before the Medical Library and Journal Association of N. Y.)

Any considerations in regard to the treatment of cancer must of necessity be of little interest or value, unless they are based on some reasonable theory of its origin. The theory of the blood-origin of cancer has in the past been universally accepted, and to-day even it is probable that the majority, both in and out of the profession, believe some materies morbi in the blood to be the original cause of the local cancerous manifestations.

Others, while hesitating to accept such a statement unreservedly, look upon the disease as necessarily constitutional. It is not at all strange that such should be the generally accepted view, since Paget, and nearly all the older pathologists, teach that some morbid material in the blood must coexist with some special condition of tissue "appropriate to be the seat of growth incorporating that material." This ancient theory has strong arguments for its support, and it certainly seems hard to explain some of the symptoms of this terrible disorder on any other hypothesis.

I think it may be regarded as fortunate that another theory has been advanced—that of the local origin of cancer in its early stages—and that so many keen observers of the present day have argued so plausibly in its favor. Viewing cancer as primarily a blood-disease, we have very properly and logically adopted constitutional treatment. We have deprecated early extirpation by the knife, and, in the vast majority of instances, operations have been performed only after the growth has been fully developed, and too frequently after the so-called cancerous cachexia has become manifest. On the other hand, if we regard this disease as primarily of local origin, it will be proper to reverse the old and accepted methods of procedure. Early operations will be the rule rather than the exception, and instead of using stimulants and constitutional remedies with a view to counteract the supposed poisonous state of the system, we shall possibly more and more come to recommend a light form of diet, with no stimulants.

This remark applies of course only to the disease in its early stage, and before there is any approach to constitutional disturbance.

Cases are not wanting in which hemorrhoids and certain forms of benign external tumors have become absorbed under a persistently rigid system of diet. It is well known that when the body is feeding on itself it does not spare adventitious tissue, and when, according to Dr. Morgan, a uterine cancer has been known to disappear under a vegetable diet, just sufficient to sustain life, the question as to the possibility of "starving the disease out" is to say the least suggestive. Hard as it may be at first thought to reconcile some of the symptoms of cancer with other than a constitutional or blood-origin, it seems to me at least equally difficult, after an acquaintance with the views of Virchow and Van Der Kolk, of Mr. C. H. Moore of London, and others, to regard the disease at its first inception other than of local origin—either with or without a constitutional tendency. One of the most interesting and clearly suggestive contributions in support of this theory is the brochure of De Morgan,* whose experience has been large, and whose generalizations are worthy of wide dissemination.

In all ages tradition has ever been regarded as the most conclusive of proofs; hence the general assent to this idea of the constitutional origin of cancer as the only true or even plausible theory. The indisputable fact of the almost universal reappearance of cancer after its removal is one of the strongest arguments in favor of a specific dyscrasiæ. There are not a few instances certainly where cancer, after extirpation, has never reappeared; but those on the side of its constitutional origin claim that this fact is of but little account as against the doctrine of blood-poisoning, since, after removal, the disease has in many instances returned, after as great a lapse of time as has ever intervened between the extirpation of such growths and the subsequent death from other causes of the individuals operated upon. On the not very well grounded assumption that a cancerous tumor is a sort of eliminating organ, and in its relations to the materies morbi occupies much the same position as a secretory gland towards the eliminated matter, it is claimed in these cases of non-recurrence after removal, that the original blood-taint had become exhausted at the time of the operation. Paget again teaches that two conditions are necessary for the development of cancer, viz., a "morbid material in the blood, and a special condition of tissue"—hence the occasional failure of a malignant tumor to reappear after its removal results from the absence of any fit nidus for its reproduction. According to this theory the blood may be cancerous through a long life without any local manifestation of cancer; and if it seems difficult to account for this local manifestation on any other ground than a blood-origin, it certainly seems equally difficult to believe that cancerous elements may be for years flowing through the body and yet give no evidence of its presence.

The cancerous cachexia upon which so much stress is laid may in many respects be said to be a myth. Very rarely, if ever, are the first manifestations of malignant tumors associated with a cancerous cachexia.

A woman may have a fully developed scirrhus of the breast for months, and even years, and exhibit no marked failure of strength or color, and it is a well recognized fact, that cancer selects frequently the strong and ruddy. In most diseases known to be of blood-origin, there occurs, within a very short time, a manifest deviation from sound health. Syphilis, it is said, may be an exception. The syphilitic taint may exist, for a long time, without any evidence that the system is thus affected, until some external injury may be followed by an outward expression of its presence. On the other hand, it is claimed that injuries, whether occurring before the appearance of the growth, or after its removal, exert no special influence in starting up either a primary or a secondary cancerous development, and so far as concerns the cachexia, not only is it frequently absent, as before remarked, for a long time after the appearance of the tumor, but sometimes even, the strength

* The Origin of Cancer, considered with reference to the treatment of the disease, by Campbell De Morgan, F.R.S. J. & A. Churchill, Publishers. London, 1872.

remains fair, the digestion good, the complexion ruddy, for a considerable period during the process of ulceration. In whatever light the subject is viewed, it certainly seems reasonable to suppose that the symptoms of exhaustion and wasting away, together with the attendant cachectic appearance, may possibly be due to the continual absorption of this foulest of all discharges.

The evidence in support of this supposition becomes still stronger from the fact that patients who die from unulcerating cancer become exhausted and waste away, without, in the majority of cases, giving evidence of any cancerous cachexia. Why is it that after the extirpation of a cancerous growth the health of the patient, as a rule, so markedly increases in every respect, and when, through the propagating influence of the germ-matter that is usually left behind, the disease returns,—why is it that the health and strength again fail? Those who advocate the theory that cancer is merely the local manifestation of a constitutional disease would account for this fact on what is termed the secondary cancerous cachexia.

Paget says: "The morbid material is the essential constituent of the cancerous diathesis or constitution; and when its existence produces some manifest impairment of the general health, *independent* of the cancerous growth, it makes the primary cancerous cachexia." The cachexia present after the cancerous development he terms secondary.

In point of fact, the cachexia termed primary has insufficient ground on which its existence can be based, and even Mr. Paget, in another place, admits that it may not be present. It is well known that when a cancerous organ is removed, the disease seldom returns in its fellow, but frequently appears in places that are rarely the seat of primary cancer. In commenting on this fact, De Morgan very justly remarks, "that if recurrent cancer is a result *de novo* of the continuity of action of a morbid process originating in a diseased state of blood in combination with a fitting tissue, should we not expect that the return would be almost always in some organ which is the common seat of the disease. It is still stranger that it should occur in nineteen cases of twenty in tissues or organs which are rarely the seat of primary cancer."

In these brief considerations concerning the origin of cancer, it has not been proposed to offer anything original or in any way to exhaust the subject. I would merely call renewed attention to the recent theory concerning the local origin of cancer, and suggest that, in the future, we pursue in its treatment a course more directly from the stand-point of this theory.

As a contribution in this direction, I offer the following case, and though it proves nothing as to the curability of cancer, it will, I am sure, commend itself as worthy of record.

Case.—Mrs. H., a married lady, aged about forty, came under my observation, through the kindness of Dr. J. L. Cabell, of the University of Va. The patient was suffering from cancer (scirrhus) of the left breast of about the size of an ordinary orange, and in addition one of the axillary glands was enlarged to the proportions of an ordinary hickory-nut.

She had observed while in India, eighteen years before, a small lump in the breast, but during all the years of her residence in that climate it remained stationary and never annoyed her. About eighteen months before I saw her, she left India for England, and soon after arriving in that colder and damper atmosphere the lump began to enlarge. During the process of its growth she has suffered from occasional neuralgic pains, but of no great severity.

On June 12, 19, and 28, 1873, I operated by the ordinary method of electrolysis, on each occasion introducing three needles. These efforts merely resulted in a softer condition of the tumor, with possibly some slight diminution in size, and I determined to extirpate the growth, and to destroy the surrounding tissue by the undermining electrolytic process. The patient went to her home, and in October she returned and submitted to the radical operation. Instead, however, of taking away the tumor by the process proposed, I secured the services of Dr. A. B. Crosby, who on the eighth day, after the patient had been thoroughly etherized by Dr. N. B. Emerson, quickly removed both the breast and the enlarged gland of the axilla.

I had at hand an appliance consisting of some twenty points, projecting from a metal plate an inch and a half long, by an inch in width.

This contrivance, which may be termed a small harrow, was placed on a portion of the surface of the wound, and the operation was continued.

The needles penetrated somewhat into the exposed tissues, and the electrolytic process, which was at once begun, gave evidence of its usual activity. Hydrogen was developed in abundance, and the tissues changed in color and consistency, and rapid and complete destruction followed to a considerable depth. By this method the whole of the freely exposed surface was worked over and destroyed, and those portions that were more or less hidden were treated by two or three ordinary electrolytic needles. It was necessary to observe some caution in the regulation of the strength of the current and the position of the poles, for when the current was increased above a certain point, or, through the position of the poles, affected too directly the pneumogastric nerve, the heart's action became most markedly lowered both in frequency and force. On modifying the influence of the current, however, the circulation became as strong as usual—for a moment, indeed, there was an increased vigor in the reaction. The suppuration, which was quite profuse for a time, was followed by a healthy granulating surface, and in ten days the patient was sufficiently recovered to return to Va., where the healing process progressed favorably throughout.

The points of particular interest and the thoughts suggested by the above case may be thus summed up:

First. Treatment by the ordinary method of electrolyzation resulted only in a slight diminution in the size of the tumor, and it became evident that decided reduction was not to be expected in any reasonable length of time. One of two methods of procedure have generally been attempted in the treatment of cancer by electrolysis; either a few needles have been introduced through which a current of moderate tension is passed, but insufficient to excite the ulcerative or suppurative process, or else a greater number have been introduced and a current of sufficient strength used to effectually destroy the parts upon which it acts. By the first-named method the process of absorption is in some cases excited to a marked degree. Non-malignant tumors, goitres especially, are sometimes dealt with most effectually. A goitre of considerable size and of long standing on the person of a young lady, referred to me by Dr. J. Marion Sims, was completely dissipated by the feeble electrolytic effects following a dozen external applications. The case of a patient at Bellevue Hospital, whom I treated for scirrhus, illustrates the remarkable power of electrolysis to excite absorption. It has been referred to before, but I am impelled to speak of it again on this occasion, since the ultimate fate of the patient is now known—dissipating the hopes that attended the case. I operated

in the amphitheatre of the hospital, using four needles and a comparatively feeble current. No ulceration was excited, but the tumor began to decrease in size, and in a week's time was one-half its original bulk. A second operation was followed by a still further decrease in size. The patient then left the hospital and for many months was lost sight of, and we were led to hope that the absorbing process had gone on to complete dissipation, but she subsequently returned and died of the disease in a remote organ. From my own experience, then, and from what I can learn of the experience of others, it would seem reasonably certain that we are not, as a rule, to expect much that is favorable in the treatment of cancer, by attempting through our present knowledge of electrolytic methods to excite the process of absorption.

The *second* method—that of introducing a large number of needles and using currents of great strength—has been occasionally attempted and encouraging reports have been made.

Sufficiently well-authenticated accounts of cases brought to a successful issue in this way are, however, it seems to me, wanting. It would be far better to introduce the needles around its base, or, better still, by means of one long, narrow, double-edged blade, to transfix the growth, or rather, transfix the sound parts below the growth, and then, partly by the cutting edges, and partly by the chemical action of the current proceeding from the edges, to remove the tumor at one operation.

The method adopted in the above case, however, seems to me to be superior to either, from the fact that although two distinct operations are performed, less time is consumed in the operation, and it is possible more effectually and to a greater depth to destroy the underlying tissue.

Second. It is worthy of note that the application of the current seemed to be stimulating in its effects. When applied so as to affect too directly the heart, it is true that the heart's action became weakened, but the moment the tension of the current was lessened, or the electrodes removed to another part, the pulse became fuller and stronger.

Third. The healing process was rapid and healthy in all its progress, and the health and strength of the patient, which before the operation were by no means robust, were not at all impaired subsequently. The operation, in short, were followed by no greater prostration than if the knife alone had been used.

I do not present this case as of special importance, further than as it is an illustration of a somewhat new method in the treatment of cancer, founded on the reasonable assumption that it may primarily be of local origin.

The disease may in our patient manifest itself again after a comparatively short period, or it is barely possible that its reproductive power may have been destroyed and the disease overcome.

The first appearance of the growth was many years before; it had been enlarging for nearly two years, and one of the axillary glands was involved; hence it cannot be regarded as typical of cases on which it would be desirable to test this method through a series of years.

So long as we are able to do so little towards the radical cure of cancer, it can never be amiss to refer to any means which will even for a time relieve the awful agony that so frequently attends it.

It is not sufficiently understood by the profession what a magic influence an intelligently directed application of the constant current exercises, as a rule, over the throbbing pains of scirrhus, especially of the female breast. The woman at Bellevue to whom I referred had suffered most severely for many weeks. After the first introduction of the needles every vestige of pain left her, and during the two weeks that she was under observation, before leaving the hospital, she was entirely comfortable. A number of similar cases might be recorded, but I will offer only the following, which is perhaps of more interest than the majority.

In February, 1873, Mrs. ——, a patient of Dr. Everett Herrick, came to me, seeking relief from an immense ulcerating cancer of the breast. The tumor had been removed more than a year previously by Dr. W. H. Van Buren, but the wound did not entirely heal, and, a few months subsequently, the ulcerative process began, and steadily progressed. For many months the pain from which she suffered had been of unusual severity.

By the advice of her physicians, above named, she was submitted to localized galvanization of the sound portions surrounding the ulcerating part, and by frequent applications the intense pains were for nearly four months held in almost complete abeyance. At times, however, her sufferings were most intense, and words fail to express the instantaneous and absolute relief that invariably followed the treatment. I would occasionally find her in the morning suffering most acutely. An application would dissipate the pains, and for twenty-four hours frequently, and sometimes for forty-eight, she would move about and rest in perfect comfort. In the latter part of May it was observed that the current did not afford the same relief as formerly. The character of her sufferings had, however, changed. In place of the sharp, shooting pains simulating neuralgia, the distress consisted in a constant burning and itching, which annoyed her more or less until her death some few months subsequently. It must be remarked tha her later sufferings were not to be compared with those which the current so effectually allayed.

Was the change in the character of her pains the result of the galvanization, or is it probable that, if left to nature, the characteristic neuralgic pains would in the same way have been replaced by the less distressing symptoms of itching and burning?

It is impossible to say, but it seems reasonable to attribute the changed action to the influence of treatment. It is proper to say that, during the course of treatment, I operated in the presence of Drs. Van Buren and Herrick, by both the galvanocautery and electrolysis, with the vain hope of modifying in some degree the profuse and offensive discharge and checking the rapidity of the ulcerative process. This case was alone sufficient to teach the necessity of care in the application of electricity, and to confirm the statement that it is not so much electricity that relieves and cures as the method of using it. An application too prolonged, or with a current of too great tension, would not only fail to relieve, but on the contrary decidedly aggravate the distress. The cathode, applied to the seat of pain, did not relieve as did the anode.

The pain was for some time overcome by simple localized galvanization, but during the last weeks of treatment the applications were effectual only when the electrodes were separated as far as possible.

Dr. Sharpey, the distinguished professor of physiology at University College, is to be placed on the Civil List for a pension of £150 per annum.

RESECTION CONSIDERED AS A REMEDY FOR ABDUCTION OF THE GREAT TOE —HALLUX VALGUS—AND BUNION.

By DR. A. ROSE,

PHYSICIAN ST. FRANCIS HOSPITAL.

FREQUENTLY the great toe of aged persons is found in the position of abduction—abducted outward from the median line of the body. This abduction has also been called hallux valgus, being analogous to "pes valgus" and "genu valgum," all of which are outward distortions, or deformities due to abduction. Hallux valgus is a kind of incomplete luxation, and is in rare cases the result of an abnormal process of growth. It is observed, however, that the deformity does not generally begin until the body has ceased growing. In a number of cases it is the result of an arthritis—usually of a gouty character—or, according to Hueter, of a panarthritis urica, which attacks almost always the first metatarso-phalangeal joint. In most cases, however, abduction of the great toe is caused by the pressure of ill-made and ill-fitting boots or shoes. If the broad expanse of the heads of the metatarsal bones is forced into a narrow boot, a pressure is brought to bear both upon the great and little toes, resulting in the formation of a corn on the metatarso-phalangeal articulation of the little toe, while the great toe, on account of its greater lateral mobility, yields to the pressure upon its distal extremity, and becomes abducted, occupying a position upon the dorsal or under the plantar surface of the next toe.

Hallux valgus always causes a portion of the capitulum metatarsi to be removed from contact with the phalangeal articular surface, thus inciting a process of hyperplasia on that portion of the articular surface which is relieved from pressure. This condition is followed by a thickening of the synovial membrane, with disintegration and shrinking of the cartilage, so that, in course of time, all the parts of this first and most important of the metatarso-phalangeal joints may become affected (panarthritis).

The head of the metatarsal bone now forms a remarkble protuberance, which is still more enlarged by a bony proliferation of the bony tissue, caused or promoted by the continued pressure upon, and irritation of, the affected joint. Froriep described this affection as an exostosis of the great toe, after the proliferation of the bony tissue has taken place. In most cases, however, there exists only expansion of the bone, and rarely exostosis.

The continued pressure of the boot upon the proliferating articular head may produce a bursa over the enlarged bone, which frequently communicates with the joint. The bursa itself may also, in consequence of continued irritation, especially through cold, become the seat of an inflammation, followed by ulceration and the formation of bursal fistulæ, which are very difficult to heal, and which may, by perforation, cause an inflammatory suppuration of the joint, with all its evil consequences.

Hallux valgus, like varicose ulcers of the leg, is principally met with among the laboring class, and, according to my experience, medical aid is not sought until the disease is so far advanced as to render walking very difficult; for the poor laborer does not apply for the usual orthopædic treatment as long as he is able to work.

Cases are reported where tenotomy, bandages, surgical apparatus, methodical motions have been employed in the treatment of this small joint. Pitha devised an apparatus to be applied during the night, consisting of a sandal, with a steel spring attached to the inner margin of the foot, to be connected with the refractory toe by a broad band. All these orthopædic appliances are inconvenient, often impossible of application, and always tedious and uncertain in the result, so that very few patients submit to them for any length of time. In fact, these cases are generally abandoned by surgeons as hopeless. We are happy to say, also, that orthopædic appliances have now been proven to be unnecessary, if only the patient is willing to submit to a simple operation in order to remedy the damage done by the shoemaker.

As an illustration of the misery and anguish caused by hallux valgus, the following instance is related by Pitha: "An old surgeon having suffered greatly from abduction of both great toes, finally, in his 75th year, cured it radically by placing first one foot on a block of wood, and chopping the toe off with a chisel and hammer, and subsequently repeating the same operation on the other foot. In spite of his old age both wounds healed promptly."

Resection of the head of the metatarsal bone has been first recommended by Hueter. He performed it, however, only in those cases in which suppuration of the joint existed, and where it was apparent that no cure could be accomplished without resection. So far as I know, the first resection in a case of simple hallux valgus, uncomplicated with abscess or caries of the joint, was made at St. Francis Hospital, in this city, by Dr. Frank H. Hamilton, April 7, 1873.

The patient, Johann Lang, 24 years old, and a baker by trade, was admitted into Hospital on March 31st, 1873, suffering from abduction of both great toes, in consequence of which he was so completely disabled that he was unable to work at his trade. Dr. Hamilton proposed total resection of the first metatarso-phalangeal joint, when I called his attention to an operation made by Hueter, namely, resection of the distal end of the metatarsal bone, but not in a precisely similar case.

As above stated, Dr. Hamilton performed resection of the head of the first metatarsal bone in this case on April 7th, 1873. The patient having recovered from the operation, and finding the foot operated upon perfectly useful, requested that the same operation should be made on the other foot, which was accordingly done by Dr. Hamilton. Before the second operation was made, however, the patient was presented to the N. Y. Pathological Society, on May 28th, 1873, and in THE MEDICAL RECORD of August 1st, 1873, there is a full description of this first case and first operation. August 4th, 1873, the patient was dismissed from the hospital; but during the last month of his stay he had been employed as a helper, and kept busy on his feet the whole day long.

On June 18th, 1873, another patient afflicted with hallux valgus was admitted into our hospital: Joseph Meyer, 30 years old, laborer, abduction of the left great toe, complicated with caries of the metatarso-phalangeal joint. This patient was operated upon by myself. In place of using the bone-cutter for decapitation of the first metatarsal bone, as Dr. Hamilton had done, I applied the straight, narrow saw, and must confess that, by using this instrument—which was, next to the bone-cutter, recommended for this operation by Hueter—it is impossible to avoid contusing and lacerating the soft parts surrounding the bone. This operation proved equally successful, and the patient was dismissed on September 8th, 1873, perfectly able to assume his work again.

In the third case, E. Z., 34 years old, waiter, there existed an arthritis deformans of all the phalangeal

joints of both feet; the shortening of the extensor tendons produced a hyper-extension of the toes; both great toes were abducted, and both little toes adducted. The operation was made by Dr. Barnim Scharlaw, who first removed the hyper-extension by a subcutaneous section of the extensor tendons of all the toes, with the exception of the two great toes. Resection of the first metatarsal head was made next, and, after the wound had healed, the fifth metatarsal head was also resected. For resection of the first metatarsal head, in this case, the bone-cutter was used; but the bone split, and there was in consequence a little more defect left than intended. The patient, however, after recovering from the wound, could use the foot perfectly; and having been previously prevented from serving as a waiter, on account of the deformed joints of the feet, he was so much pleased with the result of the operation that he asked to have his other foot also operated upon in the same manner. Unfortunately, circumstances did not permit his remaining in the hospital any longer, and he was discharged before the second operation could be performed.

The fourth and fifth cases are at the present time under treatment in the hospital.

No. 4, A. R., 50 years old, a dyer, was admitted January 19th, 1874, having hallux valgus of the right foot, complicated with caries of the joint. He was operated upon February 2d, 1874. Dr. Hamilton, who performed this and the next operation, wished to use the chain-saw. Unfortunately, however, this saw, the only one in the house, broke before the bone was cut through, and he resorted to the bone-cutter; and here happened the same accident mentioned in a previous case, namely, the splitting of the bone, leaving an unnecessarily large defect.

The fifth and last case, E. D., 19 years old, a carpenter, was admitted January 22d, 1874. He sought admittance only for a wound of a finger, caused by a circular saw. I discovered accidentally that he had abduction of both great toes. As he was unable to work at his trade, while the wound of the finger was under treatment, I proposed to him our operation of resection. Though his feet had not as yet seriously disabled him, as was the case with the other patients, he comprehended the advantage of my proposition, and submitted to the operation February 9th, 1874. This time decapitation was made by the chain-saw, and this proved preferable to the other instruments, as by its use the splitting of the bone, as well as injuring unnecessarily the soft parts, was avoided.

Our experience proves this operation to be free from danger, recovery having taken place in all the cases in a short time, through the use of the permanent warm-water bath.

The operation consists in making a short longitudinal incision over the projecting portion, down to the bone. The soft parts and tendons are raised from the surface of the bone, and the head is excised. For this purpose the chain-saw is to be preferred to the bone-cutter. The hemorrhage is usually slight, especially when Esmarch's bandage is used. In order to permit the free escape of the secretions, the wound is left open and the foot is placed—generally after 24 hours and sometimes sooner—in a water-bath having a temperature of 90° Fahrenh. After about two weeks the warm bath is replaced by warm-water fomentations. The wound rapidly fills up with granulations; the great toe, somewhat shorter, becomes straight without any assistance, and a firm tissue is formed at the point of resection between the toe and metatarsal bone, while the weight of the body can be well supported by the uninjured plantar surface. Suppuration of the sheaths of the tendons has never occurred, and only in the one case of suppuration of the joint did we have a small circumscribed phlegmon and abscess on the dorsal surface of the foot, which, however, having been opened, speedily got well.

Amputation of the great toe has frequently been made for hallux valgus, but when amputation at the joint (exarticulation) is practised, a cicatrix usually remains on the head, which causes great pain when it receives the pressure of the boot; while amputation, including the head of the metatarsal bone, deprives the arch of the foot of an essential support.

In short, my experience in resection of the joint in cases of hallux valgus leads me to consider this operation preferable to amputation and to any form of orthopædic treatment in old and extreme cases. I must, therefore, regard resection as a valuable addition to our surgical treatment of these unfortunate cases.

Résumé:

1. Resection of the head of the first metatarsal bone for abduction of the great toe is, according to our experience in St. Francis Hospital, a safe operation, when, as after-treatment, submersion in warm water is adopted.
2. Resection is equally safe as, and furnishes a more useful limb than, amputation.
3. Resection in old and obstinate cases of hallux valgus is to be preferred to orthopædic appliances.
4. Finally, resection, properly made, leaves the limb without apparent mutilation, and in a condition as useful as the healthy and sound foot.

A FEW REMARKS ON THE TRANSFUSION OF BLOOD, WITH A MODIFICATION OF THE APPARATUS OF AVELING.

By B. E. FRYER, M.D.

SURGEON U. S. ARMY.

To show that the subject of transfusion is one which a large portion of the profession has not yet fully weighed the importance of, nor realized the fact that this measure can frequently be made applicable in cases which are now quietly otherwise yielded to death, we have only to call attention to the rarity of reported instances in which the operation has been taken advantage of, and to refer to the many obvious ones in which it should be made available. Even in threatening dissolution from the direct loss of blood,—such as from wounds of large vessels, from prolonged epistaxis, or, in probably one of the most frequent opportunities met with, from hemorrhage, post-partum, where the restoration of blood by transfusion has been, so to say, legitimatized—but few of us are prepared for the emergency, or if prepared, do promptly act and give the then almost only chance for life.

We will briefly state the kind of cases in which it has occurred to us that transfusion should be had recourse to without hesitation, and they may be conveniently noted under two heads.

We would include in the *first* class those cases in which a copious blood-loss has occurred and immediate death is threatened. As is well known, it is in these mainly that the measure has been applied. It might well be tried in cases of injury accompanied by a more moderate hemorrhage, and where it is necessary to do an important surgical operation, and this operation is delayed (often disastrously) for a reaction by

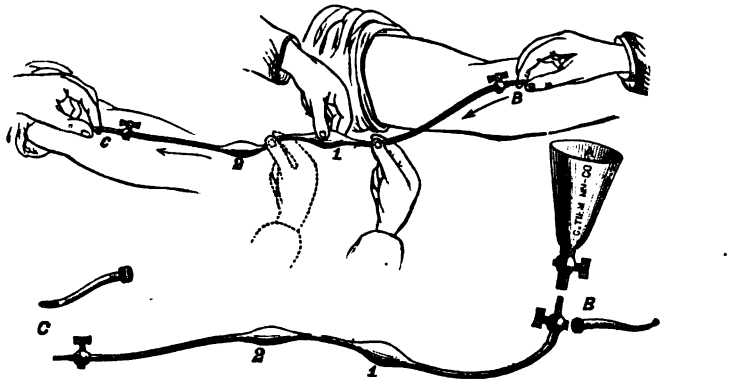
ordinary means. Moreover, it should be done before or after necessary surgical measures in asthenic patients, in order to avert pyæmia and its allied evils, especially in operations where the peritoneum is involved. After labor, too, where hemorrhage may have been great, but not profuse enough to threaten immediate death, it should be done to avoid septicæmic difficulties. For that depression from loss of blood, etc., is a most direct cause of pyæmia and its pathological associates, those of us who have had to treat large numbers of gunshot and other injuries, and to operate in these cases where hemorrhage and other depressing causes had done sad havoc, well know.

But we have in the *second* class a larger number of cases—diseases both acute and chronic—and here we more commonly meet with opportunities. In such, transfusion has scarcely been thought of; but it is in these, too, it ought to be, and will be, we think, taken advantage of. Of the acute cases we refer to, those in which natural nutrition is for the time suspended, either from a direct lesion of the blood-making system in one or more of its divisions, or is indirectly affected in consequence of some profound systemic impression, where if we can but bridge over a short period by keeping life's machinery going, we may ultimately bring about a restoration of the healthy nutrition process, and thus save life. To particularize: acute gastric troubles, giving excessive and continuous vomiting; acute diarrhœas and dysenteries; in peritoneal inflammations, in some of the low forms of fevers where waste is excessive and the absorption of nourishment nil. In cholera it should be done more generally than it has been. It might be tried, too, in some of the acute diseases of young children, particularly in those which give convulsive movements and convulsions proper, and which often indicate to us the diminished blood-supply to the brain, and tell us that death may come before the return of the natural food absorption can again put the nerve-centres *quietly* at work.

In chronic cases where the blood-making is reduced or nearly destroyed, we might often prolong life by transfusion. Such cases are not frequent, though we need not enumerate them. We might well apply the measure even in some cases of phthisis pulmonalis.

In regard to the fluid to be transfused. As is well known, human blood is that to be most desired, after this the blood of some of the lower animals may be selected. Dr. Hodder, of Canada, threw into the veins of some of his cholera patients fresh milk, and with excellent results. The writer has experimented with milk injections in the veins of dogs, and though the experiments have not been completed as to a test of the nourishing effects of the milk so given, no bad symptoms have become apparent. If it can be satisfactorily proved that milk may be safely and generally used in transfusion, and with the desired result, a great advance will be made in the matter, it being nearly always obtainable, while many of the difficulties and inconveniences in the use of blood will be avoided. A saline solution (such as that of Mr. Little *) should be tried to save life, if nothing else is at hand.

The instruments for transfusion are, as is well known, quite numerous, and while many of them are very good, we believe that of Aveling, for immediate transfusion, to be probably the simplest, safest, and most easy of application. We have lately modified it by adding another bulb to the tube, and by having both tube and bulbs cast of the rubber into one piece. By the additional bulb we can save time in doing the operation, and can keep the blood moving along the tube almost continuously. In having the tube and bulbs in one, we do away with the metal portion which couples them in Aveling's apparatus, and we thereby diminish the risk of the blood lodging and coagulating; while we can, if necessary, compress the whole apparatus more completely. As in Dr. Aveling's instrument, there are no valves. The inner wall of the whole apparatus is perfectly smooth, and we have had the opening from tube to bulbs made a gradual slope, thus altogether doing away with corners in which the blood might be arrested and form a clot.



The instrument of Aveling is intended for immediate transfusion. We have added a glass vessel which can be fitted to the tube, and the whole then used as a mediate transfuser if desired. The accompanying cut gives a good representation of the apparatus.

The manner of using the instrument is very similar to Aveling's. The canula marked B is placed in the giver's vein, that marked C in the vein of the receiver. The tube and bulbs having been filled with warm water, or, better, with Mr. Little's saline solution (also warm), are now adjusted to the canulæ and the blood allowed to flow into the apparatus. The canulæ being steadied by an assistant, the tube is to be nipped tightly between the fingers, close to the giver's or efferent end, and then the bulb marked 1 is to be compressed, and the blood of course forced on towards the receiver. While this bulb is still held compressed, the tube at the giver's side is to be relaxed, and that portion of it between the bulbs is to be nipped; bulb 1 is relaxed, and No. 2 compressed and held; then the tube at the receiver's side is to be seized and held to prevent regurgitation, and the whole apparatus allowed to refill. The same operation to be repeated till sufficient blood

* Mr. Little's solution is composed of chloride of sodium, 60 grs.; chloride of potassium, 6 grs.; phosphate of soda, 3 grs.; carbonate of soda, 20 grs.; water, 20 ounces.

is transfused. As suggested by Dr. Aveling, a few drops of ammonia solution may be injected into the bulbs now and then, by a fine-pointed hypodermic syringe, in order to more effectually prevent coagulation. It will be found that considerable force is necessary in sending blood or other fluid into the veins. This we discovered while doing transfusion twice in a case after hemorrhage from gunshot injury, and we have also found it in our experiments on the lower animals. It is a fact we have not seen noted in connection with transfusion, and one well worth remembering.

In order to use the apparatus as a mediate transfuser, the vessel marked A in the cut receives the blood, the tube is to be applied, and the instrument used as before directed. If the blood is not defibrinated and strained, three or four drops of ammonia solution to each ounce are added, in order to avoid coagulation.

The instrument is made by Messrs. Tiemann & Co., 67 Chatham street.

We would suggest to those who may become interested in transfusion, that though the operation is a simple one, it requires care, and it should first be practised once or twice on the lower animals; no difficulty will then be had in doing it on man when occasion requires.

FORT WOOD, NEW YORK HARBOR,
February 20, 1874.

ARTICLES IN OUR EXCHANGES.

ANATOMY AND PHYSIOLOGY.

On the structure of tendons. SPINA. *Med. Jahrb.*, iii., 1873.

On the nerves in the knee-joints of rabbits. NICALODONI. *Ibid.*, iv., 1873.

On the structure and mechanism of the bladder and urethra. JURIÉ. *Ibid.*

Retention cysts of the female urethra in new-born children, and their relation to the formations of caruncules. ENGLISH. *Ibid.*

Physiological investigations on digestion and absorption in the large intestine of man. CZERNY and LATSCHENBERGER. *Virchow's Archiv*, Jan., 1874.

Considerations on the os femoris. MERKEL. *Ibid.*

Reflex paralysis of the vasor nerves, and affections of the spinal cord, with lesions of various organs following the suppression of cutaneous perspiration. (Varnishing of animals.) FEINBERG. *Ibid.*

Relation between oxygen and the formation of pus. BINZ. *Ibid.*

Transfusion of water in the capillaries under blood pressure. KÖRNER. *Allg. Wien. Med. Ztg.*, 1, 2, 1874. (Continuation.)

Contribution to the embryology of the vertebrates. GOETTE. *Archiv f. Microscop. Anat.*, x., 2, 1873.

Structure and development of the ovary and Wolffian duct. ROMITI. *Ibid.*

The ganglionic bodies of the sympathetic nerve. ARNDT. *Ibid.*

The structure of the electric plates of malapterutus. BOEL. *Ibid.*

A method of demonstrating the axis cylinder processes of the ganglion cells in the spinal cord. ZUPPINGER. *Ibid.*

Contribution to the anatomy, physiology, and pathology of the placenta. C. HENNIG. *Schmidt's Jahrb.*, 11, 1873.

Malformation of teeth. BAUME. *Deutsche Vierteljahrsschr. f. Zahnhlkde.*, Jan. 1874.

Anatomy and physiology of the kidneys. HEIDENHAIN. *Archiv f. Microscop. Anat.*, x., 1, 1873.

Origin and development of the red blood-corpuscles in man. SCHMIDT. *Month. Microscop. Jour.*, Feb., 1874.

Kleinberg's researches on the anatomy and development of hydra. ALLMAN. *Ibid.*

SURGERY.

Removal of tongue in two cases—Regnoli's method. ARTURO MENZEL. *Gaz. Med. Ital. Lombard.*, 2., 1874.

Thoracentesis in pleuritic effusions. LUIGI COLASTRI. *Ibid.*

Spasmodic stricture of the urethra. APARINO. *Anfit. Anat. Espan.*, Jan. 15, 1874.

Surgical pathology of the organs of locomotion. ALBERT. *Med. Jahrb.*, iii., 1873.

Spontaneous fracture of the thigh in the lower third. Autopsy. VEREBELY, *Jahrb. f. Kinderhlkde.* vii., 1, 1873.

Wounds produced by foreign bodies. M. LANGENBECK (Hannover). *Memorabilien*, 9, 1873.

Femoral aneurism treated by injections of ergotine. PLAGGE. *Ibid.*, 10, 1873.

On conservative surgery. BOETTGER. *Ibid.*

On operations for hernia. TOSSINS. *Allg. Med. Central Ztg.*, 3, 4, 1874.

Report on cases of lithotripsy. IVANCHICK. *Allg. Wien. Med. Ztg.*, 1, 1874. (Continuation.)

Wax candle incrusted with phosphates, measuring one and a half inches by three lines, and seven weeks in the bladder, removed in pieces. IVANCHICK. *Ibid.*, 3, 1874.

Galvano-caustics. VON BRUNS. *Deutsche Klin.*, 1, 1874.

Case of springing finger (doigt à ressort Nélaton). HAHN. *Allg. Med. Central Ztg.*, 12, 1874.

Two cases of traumatic tetanus successfully treated with chloral. CORYLLOS. *Allg. Wien. Med. Ztg.*, 4, 1874.

Treatment of parenchymatous and cystic goitre. STOERK. *Wien. Med. Woch.*, 44, 1873.

Extirpation of four cancerous tongues after ligation of the lingual artery. WEICHSELBAUM. *Ibid.*

Extirpation of a kidney after a wound—complete recovery (conclusion). BRANDT. *Wien. Med. Woch.*, 48, 49, 1873.

PATHOLOGY AND PRACTICE OF MEDICINE.

Echinococcus hepatica—puncture. BERTI. *Giorn. Ven. d. Sci. Med.*, 16, 17, 18, 1873.

Experiments on cholera with Déclat's liquid. DA VENEZIA. *Ibid.*

Contribution to the subject of cancer of the muscles. WEIL. *Med. Jahrb.*, iii., 1873.

Investigations on putrid infection. CLEMENTI and THIN. *Ibid.*

On the infectious products of acute inflammations. BURDON-SANDERSON. *Ibid.*

Inflammatory changes in the ganglion cells of the sympathetic. ROBINSON. *Ibid.*, iv., 1873.

Letter to Prof. Key, of Stockholm, on "the inflammatory process." STRICKER. *Ibid.*

Contribution to the paralysis of diphtheria. KETLI. *Jahrb. f. Kinderhlkde.*, vii., 1873.

Tuberculosis of the pons varolii, and, in part, of the pedunculi cerebelli, pyramids, and olivary bodies. JARISCH. *Ibid.*

Epithelial cancer of the dura mater, with hyaline degeneration. RUSTIZKY. *Virchow's Archiv*, January, 1874.

Investigations on absorption of bone and giant cells. *Ibid.*

Development of renal cancer from the epithelia of the urinary tubules. PEREWERSEFF. *Ibid.*

Hereditary nephritis and hereditary infection in general. SAMELSOHN. *Ibid.*

Relation between the red and white blood-corpuscles after inflammation. APOLANT. *Ibid.*

Bacteria and their relations to the animal economy. HILLER. *Allg. Med. Central Zeitg.*, 1, 2, 1874.

Treatment of pneumonia. HERMANN. *Ibid.*, 1, 2, 4, 1874 (continuation).

The theory of meteorismus. OPPOLZER. *Ibid.*, 2, 3, 4, 1874.

The coarse tones in internal medicine. P. NIEMEYER. *Deutsch Klin.*, 1, 1874.

Pathology of the new formation of deutirne in the pulp. BLUME. *Deutsche Viertel. Jahrsschr. f. Zahnhlkde.*, Jan., 1874.

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Obstinate diarrhœa during pregnancy without injury to the fœtus—spontaneous cure after delivery. VALTORTA. *Giorn. Ven. d. Sci. Med.*, 16, 17, 18, 1873.

Recurrent fever in children, from observations during the epidemics of 1871–73. WEISSENBERG. *Jahrb. f. Kinderhlkde.*, vii., 1, 1873.

Ulcer of the stomach in a child, with remarks on the ulcerative process. REHN. *Ibid.*

Trismus and tetanus neonatorum treated with hydrate of chloral. HÜTTENBRENNER. *Ibid.*

New experiments on substitutes for mother's milk. HENNIG. *Ibid.*

On the employment of Nestlé's farina among children. EHRENDORFER. *Ibid.*

A rare case of leucæmia in childhood. GALLASCH. *Ibid.*

Cases of the so-called cerebral pneumonia of children. REISLAND. *Memorabilien*, 9, 1873.

Practical questions on pelvic exudations, with discharge in the inguinal region. METTENHEIMER. *Ibid.*, 10, 1873.

Extra-uterine pregnancy—fœtus encapsuled fourteen years—final rupture into the rectum, and discharge per anum—recovery. LANG. *Memorabilien*, 10, 1873.

Contribution to gynæcological surgery. DUERING. *Deutsche Klin.*, 1874.

OPHTHALMOLOGY AND OTOLOGY.

Report of the Ophthalmological Society, 1873.

1. Presentation of instruments. WARLOMONT.

The different methods for cataract-extractions and especially the so-called median extraction.

2. Linear extraction. V. WELZ.

3. Color-perception of the retinal periphery. LANDOLT.

4. Iridectomy. V. WECKER.

5. Vasomotor and secretory neroses of the eye. NAGEL.

6. Exhibition of wax preparations illustrating certain phases in the development of the eye of vertebrate animals. MANZ.

7. Anæsthesia retinæ with concentric limitation of vision. STEFFAN.

8. Instruments and arrangements for examining the eye. SNELLEN.

9. Cornea-trephining. ED. MEYER.

10. Burrows's spectacle-frames. NAGEL.

11. The chiastometer. EDMUND LANDOLT.

12. Presentation of instruments. V. WELZ.

13. Experimental studies on regeneration of the lense. JAYAT.

14. Hints on the treatment of unripe cataracts. CRITCHETT.

15. On the theory of color-blindness. TH. LEBEN.

16. Axial length and radius of the curvature of the eye. EDM. LANDOLT.

17. A method of determining simulated amblyopia of one eye. ALFRED GRAEFE.

18. Methods of linear extractions. LOGETCHNIKOW.

19. Retina of the pike. REICH.

20. Case of sarcoma of choroid. LANDSBERG.

21. Variations of refraction. HORNER. *Klin. Monatsbl. f. Angenhlkde.*

Embolism of the central artery of the retina. FERNANDEZ. *Anfit. Anat. Españ.*, Jan. 15, 1874.

Action of strychnia on amblyopic and normal eyes. T. COHN. *Wien. Med. Woch.*, 44, 1873.

NERVOUS DISEASES.

Topographical and diagnostic laws in chronic nervous affections. BENEDIKT. *Allg. Wien. Med. Ztg.*, 1, 2, 3, 1874.

MATERIA MEDICA, THERAPEUTICS, AND TOXICOLOGY.

The acetate of apomorphia. FROENMULLER, SR. *Memorabilien*, 9, 1873.

Diagnosis of acute morphia poisoning. HASEMAN. *Deutsche Klin.*, 1, 1874.

SYPHILOGRAPHY AND DERMATOLOGY.

Pathological appearances which follow the internal use of the bromide of potash. NEUMANN. *Wien. Med. Woch.*, 49, 1873.

The latent stage of hereditary syphilis. (Conclusion.) EISENSCHITZ. *Wien. Med. Woch.*, 49, 1873.

MISCELLANEOUS.

Singular case of stammering. ZILIOTTO. *Giorn. Ven. d. Sci. Med.*, 16, 17, 18, 1873.

Quarantine and cholera. OSER. *Med. Jahrb.*, iv., 1873.

Popular medical treatment. W. STRICKER. *Virchow's Archiv*, January, 1874.

Report of the St. Catherine Hospital in Stuttgart for 1872–73. LANDENBERGER. *Med. Corr.-Blatt.*, 38, 39, 1873, and 1, 2, 3, 4, 1874.

Notes on the so-called acarellus. S. T. MCINTYRE. *Month. Microscop. Journ.*, Jan., 1874.

Researches into the life-history of the monads. DOLLINGER and DRYSDALE. *Ibid.*, and Feb., 1874.

Structure of the scales of Lepisma Saccharina. MOREHOUSE. *Ibid.*

Method of preparing lecture illustrations of microscopic objects. DOLLINGER. *Ibid.*, Feb., 1874.

Lymph spaces in faciæ—a new method of injection. H. P. BOWDITCH. *Ibid.*

ARMY STAFF RANK.—BROOKLYN, N. Y., March 18, 1874.—At a regular meeting of the Medical Society of the County of Kings, held in the city of Brooklyn, March 17th, 1874, A. J. C. Skene, M.D., President of the Society, presiding, and R. M. Wyckoff, M.D., Secretary of the Society, acting as Secretary, on motion of Dr. E. R. Squibb, a member, the following preamble and resolutions, after being fully considered and discussed, were unanimously adopted by the Society, and ordered to be recorded on the minutes thereof, as follows:

Preamble and Resolutions of the Medical Society of the County of Kings.

Whereas, The American Medical Association, and the Medical Society of the State of New York, as well as other medical organizations throughout the United States, have earnestly and urgently memorialized Congress to place the medical corps of the army upon the same footing in regard to rank, pay, and promotion with the medical corps of the navy, and with other staff corps;

Therefore be it resolved, That the Medical Society of the County of Kings, believing the views expressed in the memorial of the American Medical Association to be wise and just, and for the best interests of the Government, heartily endorses them, and joins in requesting Congress to remedy the injustice under which the medical corps of the army now rests.

Resolved, That a copy of this preamble and these resolutions, properly attested by the seal of the Society and by the signatures of the President and Secretary, be sent to each of the senators of this State, and each of the Representatives of this District, in the present Congress.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, April 15, 1874.

THE REORGANIZATION OF THE AMERICAN MEDICAL ASSOCIATION.

It is now pretty well conceded by all who have given any attention to the subject that the American Medical Association has been steadily losing ground for the past few years in the estimation of the profession of the country, and that some change in its organization is demanded to make it what it should be, the representative medical society of the entire country. We have on former occasions suggested the means to this end, and now, on the eve of another meeting, we seize the opportunity to refer to them again.

In the first place, we contend that the discussion of ethical questions and the detailed transaction of miscellaneous business of all kinds should, as far as possible, be kept out of the public meetings of the Association. At almost every meeting, test-questions of ethics are thrust upon the Association for its consideration, and generally there is a scene which is as disgraceful as it is unnecessary. The discussion is for the most part limited to a few interested parties, who take opposite sides and vie with each other in maintaining the reputation of the Association as a quarrelsome and undignified body. It is almost solely on this account that it has lost its influence with the profession and the public, and unless some change of its organization is effected, having for its object the prevention of further family quarrels, the Association must either disband or die of inanition. One or the other of these results is inevitable. The way to separate the legislative or judiciary element from scientific element, is to have all matters pertaining to the former referred to a committee. It is highly important that this committee be large and composed of men who have the confidence and respect of the profession at large. Their judgment upon any point should be final, or at least, in case of marked disagreement, a majority and minority report should be presented, and the vote of the Association upon either should be considered conclusive. If it be necessary to have any discussion upon the subject, it should take place before the committee, and not in open meeting. It has been suggested that this committee should consist of at least twenty members, who should be proposed by the nominating committee and elected by a vote of the Association. It is important to have this committee a large one, in order that it may be representative of the whole country, one or more members being elected from each State represented at the meeting. This arrangement would make the formation of sectional rings in the council impossible.

At the last meeting in St. Louis, Dr. Davis made some propositions for the creation of this committee, but they were laid upon the table. Sufficient time has now elapsed, since their presentation, to prepare the members to vote intelligently upon them, when the matter shall be again considered. We hope that the mover of this resolution will not fail to call them from the table at Detroit, and that every friend of the Association who may be present may be prepared to act upon it, and give him all the aid and countenance which the importance of the subject demands. So much, then, for the purely business element of the Association.

Another necessary reform is in the election of delegates. We have often alluded to the cheapness of delegateship to this Association, the question in the choice being not so much who shall go, as who will go, to the next meeting. The consequence has been that the majority of the really good men stay at home and leave the discussion of topics which concern the present and future welfare of the Association to incompetent bunglers and inconsiderate meddlers. We want more stringent rules established for the election of these delegates. Their choice should be restricted to the county societies principally, and the colleges and other similar institutions should be left out of consideration entirely. By the exercise of due care in this regard, it will by and by be considered an honor to be chosen, and our best men may deem it worth their while to enter the lists on that account.

Another way of developing an interest in the Association on the part of the best medical men in the country, would be to give more prominence to the scientific element. In the first place, we prepare ourselves to do this by narrowing the discussion of the strictly business matters to a council, as already stated, and give all the spare time to scientific medicine proper. In the second place, we should develop the resources of the various sections. An experiment in this direction is to be tried at the next meeting by having phonographic reports of these sections printed in slips for the members on the morning after the respective meetings are held. We believe that this plan will tend to simplify the working of the scientific machinery,

and will not fail to be productive of great good to all parties concerned. By these means a member can not only attend his favorite section, but have the great advantage of knowing what has been done in all the others. In this connection we may mention that the rule will be established to have all lengthy papers presented in abstract, and then referred to the committee of publication, who have absolute power to accept or reject said papers solely on the ground of merit.

The suggestion of Prof. Gross, to have annual addresses on medicine and surgery, delivered in open session, by gentlemen selected by the president, is a timely one, and deserves more consideration than it received at the last meeting. These could take the place of the tedious reports on medical education, climatology, and medical literature, and would doubtless be well received by all.

Whatever we may do in our attempts to systematize the scientific work, it will avail nothing if a change is not made in the business management. It is not only useless to postpone definite action upon this matter, but eminently hazardous. The longer the procrastination, the greater the danger of an explosion, in the shape of another disgraceful scene. This disaster must come some time or another, and may be the death-blow of the Association. We trust that the physicians in Detroit will take this subject in hand, and signalize the coming meeting by one grand and determined effort to make the Association worthy of its name.

Reviews and Notices of Books.

A UNIVERSAL FORMULARY: Containing the Methods of Preparing and Administrating Officinal and other Medicines, the whole adapted to Physicians and Pharmacists. By R. EGLESFIELD GRIFFITH, M.D. Third Edition, carefully revised and much enlarged, by John Maisch, Phar. D., Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy. With Illustrations. Philadelphia: Henry C. Lea, 1874. pp. 779.

THE FORMULARY, having been for more than twenty years a familiar occupant of the physician's library, has long established its claim to practical usefulness. Though perhaps more especially adapted to the wants of the pharmacist, the prescriber finds here convenient access to a variety of valuable preparations and formulæ not afforded by the books of materia medica in ordinary use. A new edition was, however, much needed, and that the requirements have been competently met the eminent name of its editor is sufficient guarantee. Various improvements are manifest, which the marked increase in the number of pages by no means wholly represents. Perhaps their value to the physician might have been still more enhanced had some of the foreign hospital pharmacopœias been incorporated, such as the Throat Hospital Pharmacopœia of Morell Mackenzie, in London, or the *Wiener Recept Taschenbuch* of Vienna. This, however, would very likely have unduly increased the bulk of the book, and a satisfactory selection from these works would undoubtedly be an exceedingly delicate task. The pharmacopœias of Great Britain, France, and Germany have received due attention.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, January 14, 1874.

DR. ERSKINE MASON, PRESIDENT, in the Chair.

MORBUS COXARIUS—OPERATION.

DR. SAYRE presented the remaining portions of the head and neck, and a portion of the trochanter, which had been removed from the femur of a girl æt. 12. The operation was performed at Charity Hospital, Nov. 1, 1873. The patient received an injury three years previous to the operation, and the case presented the ordinary history of morbus coxarius. When the operation was performed it was found that the head and neck of the bone had been almost completely absorbed, and the acetabulum had been perforated. The limb was dressed in the wire-breeches, and the child placed in bed. At the time of the operation the patient was in a very precarious condition, having suffered from extensive suppuration and exhausting discharge. She, however, made a most extraordinary and rapid recovery. On the 10th December small spiculæ of bone, from the size of a pin's head to that of a pea, escaped from a sinus. The child is now running around in the ward of the hospital, has free motion of the limb, and can bear the weight of the body upon it very well. There was only a moderate amount of shortening.

A second specimen was presented by Dr. Sayre which was taken from the hip of a lad eight years of age, and a Dane by birth. No knowledge of his previous history could be obtained. When first seen, the left thigh was strongly flexed, with the knee above the umbilicus; it was also strongly adducted, sufficiently so to carry the knee over to the opposite side of the body. Behind the trochanter were open sinuses, and through these dead bone could be felt. There was some difficulty in determining whether the present condition of the limb was the result of fracture, or diastasis, or was due to the exhaustive discharge, contractions, etc., incident to a somewhat prolonged course of hip-disease. The latter appeared improbable, judging from the appearance of the patient. The position of the limb, however, was evidently one that could not be obtained except the head and neck of the bone were separated from the shaft. Upon cutting down to the bone, it was found that the head and neck were both entirely gone, and the acetabulum was filled with new material. The general condition was an unusually good one, and, as has been suggested, contraindicated the existence of hip-disease. The reason for this was that the openings in the hip, from which the discharge took place, were so situated and shaped as to give complete drainage during the entire progress of the disease, thus protecting the patient from the irritating and exhausting effects of the presence and discharge of large quantities of pus. The bone was exsected between the two trochanters, and was the specimen presented. Upon the inner aspect of the portion of bone removed there was an appearance indicating that new cartilage had been formed at that point. The specimen had been submitted to Dr. John J. Mason, for microscopical examination, and he reported that the portion alluded to was cartilage containing regular and fully developed cartilage cells. The practical point in this connection was that new cartilage could be developed in these cases, within one-fourth of an inch of diseased bone. Whether new cartilage is formed or not,

at the extremity of the femur, in such cases, the doctor was not able to say, for the pleasing reason that the patients did not furnish opportunities for post-mortems.

LUXATION OF ELBOW-JOINT BACKWARDS, THREE WEEKS' STANDING.

DR. SAYRE also made a few remarks of a practical nature with regard to reduction of an elbow-joint which had been dislocated backwards. It was well known that luxation of that joint backwards was very difficult of reduction unless the operation was done immediately after the accident. A man came to his office who had been suffering from this form of luxation for about three weeks. Several attempts had been made at reduction, and failed. A Jarvis adjuster had been employed, and the instrument had been broken by the force expended upon it. It was thought highly probable that division of tendons would be necessitated before reduction could be effected ; but it was decided to make one more effort, before the operation was resorted to. The man was strong and well developed. For the purpose of making extension the hand of the patient was introduced into a hollow piece of elastic basket-work, which would act after the same manner as what is known as the Indian puzzle; the more traction there is made upon the distal extremity, the firmer was the hold upon the hand. Counter-extension was made by a sheet passing through the axillary space and attached above. Traction was then made, gradually bringing the arm into the straight position.

When the straight position had been obtained, the elbow was bent firmly forwards for the purpose of lifting the coronoid process of the ulna from the intercondyliac fossa, and when it was thought that the coronoid process was sufficiently removed from the fossa, sudden and forcible flexion of the arm was made, and the bone came into place.

DR. FINNELL inquired with regard to the proper time, during the progress of a case of hip-disease, for the performance of the operation of exsection.

DR. SAYRE replied that the operation should be performed as soon as the bone was found to be uncovered of its cartilage and caries was present.

CANCER OF STOMACH, LIVER, AND PLEURA.

DR. LOOMIS presented four specimens of cancer taken from the body of an Englishman æt. 73 years, who was admitted to Bellevue Hospital, December 1, 1873. The man had no hereditary, neither was there any history of either specific rheumatic disease. He had been perfectly healthy until about three years previous to his admission to the hospital. At that time he was confined to his bed with some severe illness, the exact nature of which could not be determined. The prominent symptoms, however, were œdema of the feet, slight disturbances of vision, hemicrania, and pain in the back. He recovered from that sickness sufficiently to permit him to engage in his ordinary labor, but he said that he had never felt perfectly well from that time.

About two months previous to his admission he noticed that he was losing flesh and strength, and suffered somewhat from pain in the upper portion of the abdomen, although he was unable to give that pain a precise location. He also suffered from loss of appetite, *but at no time suffered from vomiting.* Six weeks before his admission to the hospital he noticed a tumor, which was situated in the central portion of the abdomen, and he also noticed that, when pressure was made upon the tumor, it gave him pain. There was no pain, however, independent of the pressure. He also noticed that at the same time he was becoming very weak, and that his weakness increased with the increasing size of the tumor. He was compelled to enter the hospital simply because he was unable to even walk about in the streets without assistance. At the time of his admission he was extremely anæmic. There was none of that dingy hue of countenance present which was ordinarily seen in connection with malignant disease, nor was the patient extremely emaciated. He only complained of pain in the upper portion of the abdomen and over the pit of the stomach, but at no time during his suffering from the disease had he suffered from nausea and vomiting.

Physical exploration of the chest revealed a circumscribed friction-sound at the left posterior and upper portion of the chest. There were no cardiac murmurs, except a murmur heard above the base of the heart, which was regarded as anæmic in character.

Physical exploration of the abdomen revealed by inspection the existence of a tumor situated in the median line extending upwards from a little above the umbilicus to the xiphoid cartilage. By percussion the tumor was distinctly recognized as extending from one inch above the xiphoid cartilage downwards to about one inch above the umbilicus, in the median line. Percussion, dulness, upon the right side anterior, extended from one inch below the nipple to three inches below the free border of the ribs. The region of dulness represented in the central portion of the abdomen was continuous with the line of hepatic dulness, and extended to the left beyond the free margin of the ribs. The dulness was evidently due to the presence of a solid tumor. The mass had a firm, uneven, nodulated feel, and diagnosis of cancer of the liver was made. Cancer of the stomach was rejected on account of the absence of gastric symptoms. From this time the patient went on suffering more and more pain, becoming more and more exhausted, and died on the 28th of December, as the direct result of exhaustion.

Autopsy.—Corresponding to the point at which the friction-sound was heard, was found a small mass of sub-pleural cancerous growth. The walls of the left ventricle of the heart were, perhaps, slightly hypertrophied. The right ventricle was dilated. The aorta, from its origin to the commencement of the descending portion, was extensively atheromatous. The liver was found to be twice its natural size, and the enlargement was equal in all directions. The surface of the organ was covered with nodules varying in size, form, and presenting a variety of colors, varying from an almost white to a tawny slate-color. Upon section the organ showed unmistakable evidences of the presence of cancerous growths. Almost the entire substance of the organ was involved, yet the patient had no jaundice during life. There were no evidences of cancer of the liver at any time, except the pain and enlargement.

The stomach was found distended, and, upon opening it, there was at the pyloric orifice and in the lesser curvature a large development of cancerous growth. The pylorus was constricted, but there were no ulcerations of the surface above the cancerous development. The interesting feature in this connection was the existence of extensive cancerous growth in the stomach, without any of the ordinary symptoms which attend such developments. The extent and character of the development in this case were believed to leave but little doubt but that the primary origin of the cancerous growth was in the stomach.

Upon the walls of the bladder there were noticed

some nodules of cancerous growth, which were subperitoneal. Some of the mesenteric glands were enlarged by cancerous outgrowths, and one of the bronchial glands was also enlarged, and the enlargement was probably of a cancerous nature. There was, therefore, primary cancer of the stomach, and secondary cancer of the liver, and secondary cancerous growth beneath the pleura and also beneath the peritoneum covering the bladder. The kidneys presented evidences of the existence of interstitial nephritis, which possibly accounted for the attack he had three years ago.

DR. SAYRE remarked that there must have remained sufficient healthy liver-tissue to perform the normal functions of the organ, else there would have been a development of jaundice during life.

DR. LOOMIS remarked that as a rule, unless cancerous growth was developed in such a measure as to cause pressure upon the transverse fissure of the liver, thereby causing obstruction to the ducts, jaundice was not necessarily present.

DR. O'SULLIVAN recalled the history of a case from which he had presented a pathological specimen in 1862. The specimen was one of extensive enlargement of the liver from cancerous growth. The patient lived about eighteen months after the first appearance of the tumor. There was no great amount of emaciation present, and the patient retained food to the very last. The case was recalled simply to illustrate that even large tumors which press upon the diaphragm, stomach, and aorta, and produce, as would be expected at least, more or less of irritation, sometimes do not produce any gastric symptoms whatever.

DR. FINNELL remarked that so far as the symptom of pain was concerned in connection with cancerous growth, it was extremely unreliable. It may or it may not be present. He had very often found well-developed cancerous growths in the stomach at post-mortem where no symptoms other than those attending an ordinary dyspepsia had been present during life.

ENCYSTED TUBERCULAR MASS.

DR. FINNELL presented a specimen which he regarded as an encysted mass of tubercular disease, which had been removed from the lower lobe of the right lung. The mass was about the size of an ordinary almond. The specimen had not been examined microscopically. There were no nodules of like character found at the apex. The specimen illustrated one point, namely, that tubercular masses may be found in the lungs of individuals who have died, having their lungs in an otherwise perfectly healthy condition. It had been the doctor's experience to find such developments in about one in ten persons.

DR. LOOMIS remarked that the specimen had a decided appearance of an infarction of the lung which had become encysted.

PLEURISY, EMPYEMA, AND CARNIFIED LUNG—A QUESTION OF DIAGNOSIS.

DR. LEWIS SMITH presented a specimen of carnified lung taken from the body of a child thirteen months old. The history of the case was as follows:

The child had suffered from cough for several months, accompanied by more or less of febrile excitement. The sickness had been regarded by the attending physician as being due to malarial poisoning. The doctor saw the child but once, and at that time was able to recognize the presence of pleurisy.

At post-mortem all the organs of the trunk were in a healthy condition, with the exception of the right lung, which was found in the carnified condition there seen.

The anterior portion of the lung was adherent to the walls of the chest as far around as the axillary region, and from this point to the sternum the organ was crowded upwards by pus which accumulated to about three ounces in quantity. The case was regarded as one of much interest, for the reason that the occurrence of pleurisy in infants is not infrequent, and the occurrence of empyema is much more frequent than is generally supposed. There is some difficulty in diagnosis when serum or pus is present in the pleural cavity of a young child, for the reason that bronchial respiration and vesicular respiration are conveyed from the opposite side of the chest, which may, and frequently does, lead to the error of regarding the case as one of pneumonia; and if the case proves fatal, and no post-mortem is obtained, it is very commonly supposed that the development of tubercles has caused the death of the child. Pus is very often found in the pleural cavities of children at post-mortem, in cases where pleurisy had not been diagnosticated. Pneumonia, and, as was the case in the present instance, remittent fever, are very frequently mistaken for pleurisy.

Among the doubtful cases, whenever there is perfect flatness upon percussion, perhaps in nine out of ten, there is pleuritic exudation. It is very easy, however, to determine the nature of the disease by the use of the hypodermic syringe. As illustrated in the present case, the point at which the needle should be inserted is of some interest, showing that it should be a little below the angle of the scapula, if wounding the lung would be avoided.

When the presence of pus is determined, a free opening is made through the chest-walls, and in most instances the child begins to improve from the time of the operation.

DR. LOOMIS remarked, with regard to differential diagnosis in the class of cases alluded to by Dr. Smith, that it would seem unnecessary that mistakes in diagnosis should be made; for practising vocal fremitus would at once settle the question. With regard to treatment, Dr. Loomis also remarked that he had within the last eight months successfully treated three such cases by means of the aspirator, removing a greater or less quantity of fluid from the pleural cavity, every third or fourth day, according to circumstances. This method was regarded as preferable to the free incision through the chest-walls.

DR. SMITH remarked, with regard to the use of the aspirator, that he had employed the smallest sized needle, and the size next larger, and was not able to remove the fluid through them. He did not regard the admission of air into the pleural cavity as being anything especially detrimental.

DR. LOOMIS remarked that the only objection to the admission of air under such circumstances was the liability to the development of gangrene of the lungs.

DR. FINNELL inquired of Doctors Smith and Loomis if they were cognizant of any cases of empyema that had recovered, whether in children or adults, when treated by removal of the pus through a free incision in the chest-walls?

DR. SMITH replied that, among children, he could refer to several cases of complete recovery.

DR. SAYRE mentioned a case that he had treated several years ago, in this manner, and his patient completely recovered.

DR. LOOMIS remarked that he had never resorted to free incision through the chest-walls; but that he had drawn from the chest of a boy seven years of age as high in the aggregate as twenty-five ounces of pus, by means of the aspirator, and the patient was now perfectly well.

GLIOMA RETINÆ.

DR. H. KNAPP exhibited an eyeball, with the following remarks:

The specimen was kindly sent me for examination by Dr. J. THOMPSON, of Indianapolis. It was taken from a girl, æt. 1 year, who was brought to the doctor with all the symptoms of the so-called "*Beer's amaurotic cat's eye.*" He declared the disease glioma of the retina, and urged the necessity of the immediate removal of the eye, to which the parents consented. He learned that a brother of the babe had died from the same disease when he was 2½ years of age. A cousin of the patient on the father's side had died from the same disease in his second year. The father's aunt lost two children between their second and fourth years of age, whose eyes were said to be affected precisely in the same manner.

The extirpated eyeball showed a soft, granular tumor, springing from the outer face of the totally detached retina, occupying about one third of the cavity of the eye. In addition to this larger tumor, there were several smaller, flat and nodular growths, of the same appearance, in different places on the outer surface of the retina. All the tumors consisted of small round cells embedded in a scant matrix, and of many thin-walled blood-vessels. Sections through the smallest tumors and the adjacent retina discovered that the pseudoplasm originated in the inner granular layer of the retina. There were in this layer circumscribed accumulations of small round cells forming a globular intumescence, raising the outer granular and bacillar layers, ultimately perforating them, and expanding in the space between the detached retina and the choroid.

The case is distinguished, *clinically*, by the novel feature of a family predisposition to glioma—the encephaloid cancer of earlier authors—of the retina which, as is now well known, is met with in children alone. Life can be preserved only by the early extirpation of the eyeball. The patient from whom this specimen was taken has continued in good general health, and when last seen, five months after the operation, had no symptom of a relapse. *Microscopically* the case is distinguished by the clearness with which the origin of so malignant a growth could be traced to one layer of the retina.

The Society then adjourned.

Stated Meeting, January 28, 1874.

DR. H. KNAPP, PRESIDENT, in the Chair.

THROMBUS OF THE PULMONARY ARTERY.

DR. F. D. LENTE presented a specimen of heart and annexa removed from a female patient, aged sixty-two, who had been injured on New Year's day while sleighriding. The cause of the accident was the breaking of a runner which precipitated the patient and her companions to the ground. When picked up, she was found jammed between two rocks with a fracture of the tibia into the knee-joint; at the same time one of the sleigh seats was lying across her chest.

Dr. Lente saw her within an hour after the accident, when she complained for the most part of a severe pain in the breast. The fracture was at once placed in an immovable apparatus and did well. The only sign of injury to the sternum was an ecchymosis, which increased during the time that she lived. The complaint of pain of the breast was constant, the patient affirming that she had suffered some internal injury at the time of the accident. Between the second and third week she complained of severe neuralgic pains, which continued more or less up to the time of her death. For these pains hypodermic injections of morphine were administered.

On January 24, the third week of the attack, very alarming symptoms suddenly set in, and during Dr. Lente's absence Dr. Murdock was called in, who found the patient suffering from nausea, intense headache, pains in different parts of the body, with the face perfectly blanched, and a pulse scarcely perceptible. He commenced stimulating the patient in every possible way. He gave hypodermic injections of brandy (15 minims) every fifteen minutes, and also administered morphine hypodermically for the control of the neuralgia. She had no dysphagia nor dyspnœa, and complained principally of excessive weakness. Dr. L. saw her at 5 P.M., when she was said to be rallied somewhat. She had not vomited any, and was perfectly sensible. Complaining at the time of pain across the abdomen and right ankle, an hypodermic injection of morphine was administered, and from this time until her death she did not suffer from severe pain. Despite all the efforts used, among which was the use of the faradic current, she sank, and died at 8 o'clock P.M. The diagnosis of thrombus of the pulmonary artery was made out previous to death.

At the autopsy there was nothing worthy of note in the chest contents, save the heart and its surroundings. The heart itself was well covered with adipose tissue. On opening the right ventricle it was found to contain a moderate amount of fluid-blood, and also a large firm clot passing directly through the aurico-ventricular opening, and firmly attached to the columnæ carnæ on one side, and the muscula tendinea on the other. On slitting up the pulmonary artery it was found that the thrombus completely stopped up the vessel on the left side, and left only a small passage for the blood on the right. The clot could be traced for two inches through the ramifications.

In conclusion, Dr. Lente remarked that the specimen explained why the symptoms so closely resembled those of internal hemorrhage. No connection was made out between the accident and the direct cause of death. The valves of the heart were perfectly healthy.

STRICTURE OF THE RECTUM—LUMBAR COLOTOMY.

DR. E. MASON presented a portion of the colon taken from a patient in Roosevelt Hospital, who had suffered for a long time from stricture of the rectum, and for the relief of which colotomy had been performed.

The patient first entered the hospital February 15, 1872, being then seventy-six years of age. Two and a half years before, he had suffered from a severe attack of dysentery, and six months after he recovered therefrom, he was seized with a severe pain in the bowels, which would recur at intervals for months afterwards. During December of that year a severe hemorrhage occurred per rectum, and for weeks this also continued to recur when there was any straining at stool. From this time also the pain, which he located in the middle of the sacrum and down the thighs, continued to increase, and a difficulty in defecating showed itself.

Upon examining the patient when he came into the hospital, a tight annular stricture, with some induration of the bowel, was discovered, three and a half inches from the anus. There was also some ulceration of the bowel below the stricture, and there was also a probability of the same condition existing above the constriction. The pains in the sacrum of which he complained were intense. His gait was very peculiar—he would straddle, and, partly stooping, would step lightly, as if he were carrying some heavy weight in the pelvis. The stricture admitted the tip of the little finger.

The treatment consisted in nourishing diet, and the gradual introduction of bougies. The latter he bore very well for a time, but the pain became intense and hemorrhage began to occur whenever the stricture was touched. Sometimes these hemorrhages were so severe that injections and suppositories containing persulphate of iron had to be employed. The stricture began to show a tendency for closing fast, and the patient complaining of severe lancinating pains all through the pelvis, the suspicion that the disease was cancerous was apparently well founded. On consultation it was concluded to perform lumbar colotomy as the only means of affording relief. This operation was done, opening the colon on the left side, on the 26th of June, 1872. The patient recovered very nicely from the operation, and was relieved of the different symptoms from which he had suffered. This condition continued for some months. At times, however, he would have a recurrence of the pain, which he located across the diaphragm, and would also complain of the dragging pains in the vicinity of the sacrum. These paroxysms would continue for a few days only at a time. As is usual after the operation of colotomy, the stricture began to give, and the ulcers below it began to heal. After a while, in the hope that the passage of fæcal matter per rectum might be made clear again, and the fistula healed, bougies were again passed, but the pain soon returned and their passage had to be abandoned. An examination at this time showed little or no stricture present. The idea of malignancy was then given up, and attention was directed to the possibility of the existence of another stricture higher up, probably in the vicinity of the transverse colon; this possibility was confirmed by the arrest of an œsophageal bougie after it had been passed for a short distance upwards through the artificial opening.

When Dr. Mason again came on duty, in December, he found the patient in very much the same condition. The symptoms of rectal stricture having disappeared to a great degree, he made an attempt to heal the artificial opening in the hope that the fæces might escape *per vias naturales*. For this purpose a plug was placed over the opening and kept there for a time, during which there occurred one or two natural passages. The pain, however, became so excessive that the pad had to be removed. Just after this he began to suffer from difficult micturition. He continued to grow weaker and weaker, and took to his bed, from which he never arose. The diarrhœa, which had existed for a little while before, gradually increased, and his urine had to be drawn off with the catheter. He died January 27, living one year seven months and a day from the time of the operation.

Autopsy.—On account of the extreme difficulty of obtaining a post-mortem, only a portion of the colon, including the rectum, also the bladder, were removed en masse through a small opening in the abdominal walls. Dr. Lingard, who made the examination, stated to Dr. M. that the small intestines were free, and that there were no signs of peritonitis in the neighborhood of the operation, but on the right side there were marks of old adhesions where the caput coli was bound down, and higher up the same kind of bands made the stricture in the transverse colon which was recognized during life.

The bladder walls were thickened and showed cystitis. The rectum presented little or no traces of ulceration, and little or no traces of stricture. Around the stricture, outside the gut, the tissues were considerably indented. Just above the stricture were to be seen the marks of ulceration extending along the sigmoid flexure, and up to the point of the operation. The transverse colon was constricted by bands, as before stated, and in the vicinity of the caput coli there was a third stricture with the edges ulcerated, while the surrounding mucous membrane was considerably thickened, and the neighboring mesenteric glands much enlarged. The mucous membrane of the colon was in several spots intensely congested.

Dr. Lente remarked that he had seen this case before the operation, when the stricture was very firm, and barely admitted the end of the finger. It was one of those cases which would have been diagnosticated cancerous without any hesitation. He asked, in view of the attenuated and contracted condition of the intestine, if it would not be vain to expect that the rectum could ever again take on its legitimate function.

Dr. Mason replied he thought it was worthy a trial, although he was not aware that any such attempt had been successful.

Dr. Sell remarked that Wood, of London, had succeeded in one such case.

RODENT ULCER OF EYELIDS. EPITHELIAL CANCER. SMALLER TUMORS ON OTHER PARTS OF FACE, AND A LARGER ONE ON LOWER JAW.

Dr. H. Knapp presented a specimen and the patient from whom it was taken, and added the following remarks: This patient, an unmarried woman of 29 years of age, first noticed, ten years ago, a small wart-like elevation on the skin under the inner canthus of the right eye. It grew very slowly, was not influenced by internal remedies, but increased more rapidly by the local application of caustics. Three weeks ago, when I saw the patient for the first time, it presented the character of a rodent ulcer, occupying the region of the right lachrymal sac, extending 3‴ upward, and 9‴ downward, beyond the middle of the lower lid, leaving intact, however, the edge of the lid outward from a point near the lower lachrymal punctum. Its border was elevated, nodular, and ragged, its surface exulcerated, red, uneven. Several small nodes were in different places of the face; the two most conspicuous were pigmented, and situated, the one on the forehead and the other on the edge of the left lower lid. Besides, there was a tumor on the left side of the lower jaw, springing from the bone, with a ragged, hard periphery. The patient was in good health, and showed no symptoms of a constitutional taint. The question was: Is the disease lupus or epithelial cancer? I thought that the appearance of the pseudoplasms in the skin was that of epithelioma, but the patient was rather young for a carcinomatous disease. Dr. Sands saw her in consultation, and concurred with me in the opinion that the tumor of the lower jaw probably was a sarcoma with osseous spiculæ.

Two weeks ago I removed the pseudoplasm on the eyelids, and covered the defect by a flap taken from the forehead. The result of this blepharoplasty, as you see, is very satisfactory. The flap united to the wound in its whole extent, and the movements and closure of the lids are perfect.

Microscopic examination of the specimen discovered the structure of epithelial cancer. Epithelial cells, arranged in cone-like figures, separated by fibrillous tissue in which numerous small round cells are embedded, form the prevailing and almost exclusive parts of the pseudoplasm. The small tumor on the edge of the other lid had the same structure, with additional irregular pigment-cells. Dr. Sands will remove the tumor of the jaw, and I am anxious to learn of what nature it will be.

Dr. Sell remarked that he had witnessed an operation by Mr. Bryant, of London, for removal of a growth from the forehead of a boy, similar to the one upon the jaw in Dr. Knapp's case. In that instance, the roof of one of the orbits being involved, necessitating the removal of the same, the patient became blind in consequence.

Dr. Knapp remarked that such tumors were not uncommon in the neighborhood of the orbit.

Dr. Lente asked if in Mr. Bryant's case the blindness might not have been due to the necessary injury of the supra-orbital nerve in the operation. He himself has collected several cases bearing upon this point, and published them some years ago, having had his attention drawn to the subject by one he had while interne in the New York Hospital, in which blindness of one eye was due to the embedding of a fragment of a percussion-cap over the supra-orbital nerve, and as the result of the removal of said foreign body, the sight was perfectly restored.

Dr. Hinton remarked that in the treatment of epithelia of the orbit he had found marked benefit if not an arrest of the disease from the topical application of nitric acid, and cited two cases in point.

Dr. Mason concurred in this view.

Dr. Knapp was of the opinion that after the disease had progressed to a certain extent, the knife was the only safe and reliable means of removal.

Dr. Lente thought that such wounds after operation should be treated by electrolysis, as recommended by the electricians.

Stated Meeting, February 11, 1874.

Dr. H. Knapp, President, in the Chair.

PRODUCED ABORTION—THE AGE OF A CORPUS LUTEUM.

Dr. Finnell presented the uterus of an unmarried girl, aged sixteen, who died after a ten days' illness of peritonitis, the result of a produced abortion. She had been living for some time in the family of a physician, who suspiciously falsified the cause of death, when the case fell into the hands of the Coroner. The physician in question had given the death-certificate of pneumonia, and persisted in its correctness for a long time, in spite of the fact that at the autopsy none of the characteristic lesions of that disease were present. The body of the uterus was found very much enlarged, had a roughened mucous membrane internally, associated with which condition was a corpus luteum of three or four months' development. The case was "brought in" as one of abortion, and the physician was held to answer.

Dr. Dougherty asked if any of the villi of the chorion were discoverable by a microscopical examination.

Dr. Finnell answered that no microscopic examination had yet been made.

Dr. Sell remarked that he had recently read of a case in which the possibility of pregnancy could not be entertained, but in which an old corpus luteum was found in the ovary.

Dr. Finnell thought such a case could be easily explained by assuming that the corpus luteum in question was one of menstruation.

Dr. Jacobi. What was the diameter of this corpus luteum?

Dr. Finnell. About six lines.

Dr. Dougherty referred in detail to a case of induced abortion, upon which he was called to testify as an expert. The uterus measured four inches in length, had an extremely patulous os, and presented a roughened surface internally. An examination of the latter under the microscope showed beautiful specimens of the villi of the chorion; upon which fact he centred his opinion in favor of previous pregnancy. In that case the experts for the defence testified that it was impossible to tell the difference, under the microscope, between the villi of the chorion and the appearances of an ordinary dysmenorrhœic membrane.

Dr. Jacobi remarked that the finding of the villi settled the question, as there was no possibility of mistaking them for the pseudo-membrane. Dr. Finnell's history was not, however, complete without a microscopic examination, as otherwise the jury could not judge of the real merits of the case. As far as the corpus luteum of pregnancy was concerned, there was only one reason to favor the idea of pregnancy, and that was the size of the corpus explained by the natural condition of continued congestion favoring the growth.

Dr. Dougherty presented two specimens of calculi for which he performed lithotomy, and gave a detailed history of each.

NASAL POLYPUS—A NEW METHOD OF EXTRACTION.

Dr. Keyes exhibited a young man upon whom he had operated for the extraction of a nasal polypus (myxoma). The growth commenced, seven years before, in the right nostril, and continued to increase gradually for four years, at the end of which time it was extracted by means of the polypus forceps. No relief followed; and the tumor, which evidently had not been extracted entire, continued to increase, and three weeks ago the patient consulted Dr. Keyes. The right nostril was then entirely occluded, and there was considerable deformity on the external aspect of the nose. An attempt was made to find the pedicle by the use of a probe, but without success. It seemed to be high up, and very long. Extraction with the long forceps was done, and as much of the tumor as could be reached was torn away. No relief followed. It was then discovered that a large remaining portion of the tumor was situated in the posterior nares. The patient being etherized, the forefinger of the left hand was introduced its whole length into the right nostril, which was unusually small and very dilatable. The forefinger of the right hand was then introduced into the mouth; the tumor, which was already well pushed back, was easily hooked backwards, and removed entire. The attachment was found high up on left side. The polypus itself contained in its substance two cavities of pus.

The interest of the case consisted in the felicitous method of operating, and in the apparent *à priori* impossibility of introducing a moderately large finger with such ease into a very small nostril.

In reply to a question from Dr. Knapp, as to whether the method of operating was original, he remarked that he had obtained the idea from Prof. Frank Hamilton, who had been accustomed to employ a similar procedure in such cases.

Dr. Sell remarked that Prof. Billroth performs the same kind of operation.

TUMOR OF ABDOMEN.

Dr. Hall presented specimens of the first portion of the colon, taken from a woman, aged forty-five, who was admitted into Charity Hospital last April. Four or five years before she noticed a tumor growing in the left iliac fossa, and tender on pressure. In the course of a year afterwards her health began to break down, and finally she became so ill that she had to seek admission into the hospital. At that time she was very much emaciated, complained of considerable pain in the

affected side, also of an obstinate diarrhœa alternating with constipation. She died early in January. The autopsy revealed a large tumor in the abdomen, which was bound down to the mesentery, and through which the first portion of the colon seemed to pass. It was pressing upon the external iliac artery and vein of the right side, causing an œdema of the corresponding leg. At the point of greatest pressure clots in the vein were discovered. The portion of gut passing through the tumor seemed to be perfectly healthy.

Dr. Hall presented a second specimen, removed from a woman, an habitual drinker for many years; was admitted into Charity Hospital very much broken down, and complaining for the most part of pain over the liver. She died soon after, and the diagnosis had been cirrhosis.

INFILTRATED CANCER OF THE LIVER.

At the autopsy the left ventricle of the heart was much enlarged, and pus was contained in the bronchi. With the exception of the liver, all the abdominal organs were found healthy. In the substance of the right lobe of the organ in question was an even and circumscribed infiltration of cancerous material. No other deposits were found in this or any other organ examined, and no evidence of the existence of this infiltration was given upon the surface of the liver. The tissue of this organ presented the gross appearances of a normal condition.

Stated Meeting, March 11, 1874.

Dr. H. Knapp, President, in the Chair.

RETRO-PHARYNGEAL ABSCESS, FOLLOWING DIPHTHERIA AND SCARLET FEVER.

Dr. Lewis Smith exhibited a specimen consisting of the larynx, trachea, and one lung attached, removed from a child four years old. About the middle of February the little patient was attacked with scarlet fever, which soon became complicated with diphtheria. It recovered from the fever as well as the diphtheria; at least no deposit was left in the throat. From the time recovery commenced, however, the laryngeal obstruction appeared to increase. Dr. S. saw it after it had been sick for about two weeks with the latter symptoms and about one week before its death. From the long continuance of the affection, the absence of diphtheritic deposit, and from the fact that diphtheria had already existed, the diagnosis of retro-pharyngeal abscess was made. In consequence of the previous energetic treatment which this patient had received for the diphtheria, it was impossible to make any satisfactory examination of the fauces, the resistance to any such attempt being violent and persistent. The examination of the throat was accordingly deferred, a general tonic course being the only treatment adopted. The child died a few days after.

Autopsy.—The trachea and larynx were raised from their bed by an incision from behind, and in the act about a drachm of pus was discovered nearly opposite the epiglottis, which apparently marked the seat of an abscess. The larynx presented rather a jagged appearance, and was the seat of a slight diphtheritic deposit, not sufficient, however, to cause any considerable obstruction to respiration. The trachea presented nearly a normal appearance.

There was in this case also a double pneumonia which had been overlooked during life in consequence of the very marked symptoms which referred all the dyspnœa to trouble in the throat. The pneumonia was confined to each of the lower lobes of the lungs and also extended to the middle lobe of the right side.

MEASLES AND WHOOPING COUGH FOLLOWED BY ACUTE MILIARY TUBERCULOSIS.

Dr. Smith also exhibited specimens removed from a female child, five years old, whose sickness commenced with an attack of measles on Christmas. The patient made a pretty good recovery, when it was attacked with whooping cough, the paroxysms of which became very severe. From this time the condition became critical, and there was a marked failure in strength. Dr. Smith saw the child a week before its death, when he noticed dulness under the right scapula. About three days before death the symptoms changed somewhat, and the pulse having fallen from 120 to 80, the brain was suspected to be involved. The suspicion was confirmed by an examination of the pupils. A diagnosis of tubercular meningitis following tubercular pneumonia was then made. The cerebral symptoms gradually progressed, the child grew more and more stupid, and finally died on the eighth of March.

At the autopsy the brain could not be examined. The bronchial glands were found to be enlarged and cheesy. Miliary tubercles, many of them transparent, were scattered throughout the lung. Both lungs were entirely free from pneumonia, except the middle lobe of the left lung, which was hepatized. The spleen was also studded with small tubercles, many of them transparent, some cheesy. There were also seen a few upon the liver, but none upon either the kidneys or intestines.

In conclusion, Dr. Smith remarked that the case was a typical one of its sort, and was of interest in the matter of diagnosis. The child, first attacked with measles, then with pertussis, was much wasted in consequence; the way was thus naturally prepared for tuberculous infiltration, which in its turn was followed by meningitis, the lowering of the pulse and the condition of the pupil giving the usual evidences of the latter condition. In answer to a question from Dr. Knapp, Dr. Smith stated that he believed the pharyngitis to be due to the inflammation of the fauces which preceded it.

INHALATION OF A BEAD—TRACHEOTOMY.

Dr. Sayre presented a small oblong bead, tapering at each end, which he had removed by tracheotomy from a child aged six years who had been brought to him by Dr. Cleary, of Gloucester, New Jersey. The child had accidentally inhaled the bead five days before, and when seen by Dr. Sayre presented an exceedingly anxious expression of countenance, had a constant irritative cough, and complained a great deal of pain in the chest under the sternum. The respiration was somewhat noisy and the foreign body could be heard like a weaver's shuttle, as it struck against the glottis. Judging from the size of the bead, a companion to which was shown at the time, Dr. Sayre concluded to perform tracheotomy for its extraction. The patient was etherized and the operation done in the usual manner, assisted by his son, Dr. Crosby, and Dr. Yale. The instant the trachea was opened, the bead was coughed out, when the patient took a deep inspiration and was apparently dead. Artificial respiration was kept up for thirteen minutes before the diaphragm would act of its own accord, and then occasionally for half an hour more. A galvanic battery was for most of the time brought in requisition. Finally a piece of inspissated mucus was coughed up, which, having a cavity in its centre corresponding to

the size of the bead, was evidently its envelope, or, as Dr. Sayre expressed it, its "overcoat." He supposed that the bead, at the moment it was projected from the trachea, lost its "overcoat," which covering at the first inspiration afterwards was drawn into the trachea down to the bifurcation, completely arresting the ingress of air.

Another interesting fact connected with this case was the ease with which the respiration was kept up, and for such a length of time, through the artificial opening.

MORBUS COXARIUS.

Dr. Sayre presented a second specimen, which was the head and neck of the femur removed Jan. 21, 1874, for morbus coxarius, by exsection from a girl aet. 10, a patient of Bellevue Hospital. When five years of age, she fell upon her hip and morbus coxarius soon after developed itself. She was treated by plaster apparatus in one of the public institutions, but no extension or counter-extension having been employed, the disease progressed, abscesses soon developed, and in consequence of the attendant exhausting discharges the health became broken down and the patient was reduced to the last degree of emaciation. So deplorable was her condition that the operation was performed more for the sake of allowing her to die easier than for any hope it might give for recovery.

The usual curved incision was made, the head and neck of the femur were entirely destroyed, the acetabulum perforated, and the shaft of the femur was covered with an involucrum which was quite firmly attached to the upper rim of the acetabulum, making a tolerably complete anchylosis. The diseased portions extending an inch below the trochanter, section was made at that point. She was dressed in the wire-breeches and did well until the fourth or fifth day, when sloughs formed on her sacrum and ankles, necessitating a transfer to the water-bed. Since that time she has been progressing finely.

A third specimen presented was removed from Lucy Brown, a girl aged four and a half years, whose father died of phthisis. The patient was perfectly healthy until twenty months of age, when she fell down three steps, soon after which accident she developed hip-joint disease. At the end of two years she was brought to the hospital with the limb adducted, flexed, and fixed, with three sinuses leading to dead bone.

An incision down upon the joint found the neck entirely destroyed; the acetabulum perforated in this case also. The femur was sawed off just above the trochanter minor, and the bone being found diseased at that point, the section was made lower down. At the time of reporting the case and at the end of a month after the operation the patient was almost entirely well.

Dr. Satterthwaite presented a microscopic slide preparation of the tumor presented at the previous meeting, which specimen, on motion, was referred to the Committee on Microscopy.

Dr. Knapp exhibited a very extensive gummy tumor of the brain, springing from the inner surface of the dura mater. The specimen was removed from a female patient of Charity Hospital, who had been treated during the ten preceding years for syphilitic disease in different parts of her body. She presented the history of that disease through the different phases of primary, secondary, and tertiary. Finally brain symptoms developed themselves, and she eventually died comatose.

The tumor originated in the inner layers of the dura mater, occupying a round space of about two inches in diameter and projected into the brain-substance with an irregular, nodular surface. In its transverse section it showed a thickness varying from one-eighth to three-fourths of an inch, and two portions differing in appearance and consistence. The centre and the part connected with the dura was hardish and dull yellow, whereas the peripheric portion was somewhat transparent, hyaline, and grayish. It was covered by the arachnoid membrane. The hardened yellow layer consisted of small round cells, embedded in a granular matrix. Cells and matrix were filled with fat granules, in some places so densely that the tissue appeared like an amorphous molecular substance. In the outer, gum-like portion numerous small cells lay in a moderate quantity of homogeneous basis-substance. The majority of the cells were round, had large nuclei surrounded by a thin but conspicuous layer of protoplasm; some of the cells had one or two short offsets, and some were elongated. There was a moderate amount of fat also in this layer and a great many thin-walled blood-vessels. The brain-substance adjacent to the tumor was softened to a great extent.

The nature of the pseudoplasm was unmistakably a syphilitic, gummy tumor. The specimen ranks with the largest of its kind. In an ophthalmological point of view, it adds one to a number of instances where tumors on the convexity of the brain, that is remote from the eye, have produced neuro-retinitis and subsequent atrophy of the optic nerve without specific syphilitic features. A detailed description of the case will be given in the second number of the fourth volume of the *Archives of Ophthalmology and Otology*.

Dr. Sell related a case of a sudden attack of coma, with stertor and dilated pupil, which he supposed to be due to gummy tumor of the brain, but unfortunately for the diagnosis the patient recovered.

Dr. Janeway thought that the case might be one of apoplexy, remarking, that the majority of such attacks were due to syphilitic degeneration of the cerebral vessels.

The Society then went into Executive Session.

Stated Meeting, March 25, 1874.

Dr. H. Knapp, President, in the Chair.

CANCEROUS BREAST.

Dr. Briddon presented a cancerous breast removed by operation from a female aged 33, married, and the mother of seven children. The tumor first showed itself two years ago, shortly after which the axillary glands of that side became involved, and six weeks ago the integuments covering the tumor ulcerated. Had it not been for the enlargement of the axillary glands, this case might have been regarded as an ulcerated adenocele, inasmuch as the areolar tissue covering the growth was perfectly free from infiltration. The operation was decided upon before Dr. Briddon saw the case, and although the presence of ulceration and the implication of the axillary glands contraindicated extirpation, the latter was considered advisable in this instance principally from the fact that the skin was not involved. He remarked that he would much sooner remove an ulcerated tumor of this kind than a simple nodular cancer of the skin. In the specimen presented great care was taken to remove the diseased axillary glands.

EXSECTION OF ELBOW.

Dr. Briddon exhibited a patient, a lad, upon whom he had performed the operation of exsection of the el-

bow joint thirteen months ago. The specimen had been presented to the Society at the time of the operation. After the operation the arm was put up in the usual angular splint, and at the expiration of twelve days passive motion was commenced and continued until the boy could make active motions himself. The movements in the joint were surprisingly perfect, flexion, extension, pronation, and supination being made by the patient with perfect ease.

In alluding to the operation in question, he stated his preference for leaving the periosteum intact, as there was a better chance thereby given for the formation of a new joint, not only synovial membrane being produced, but sometimes the cartilage of incrustation. If too much of the joint be removed there was undue mobility; if too little, there was a liability to excrescences which interfered, more or less seriously, with the motion. Success in any event depended, in a great measure, upon the early resort to passive motion; that is, before the end of the second week after the operation. The shortening in this case was two inches.

SWALLOWING OF A SHAWL-PIN—PASSAGE PER ANUM.

Dr. S. Caro exhibited a shawl-pin (two inches long, with a globular glass head) which had been accidentally swallowed by a child twenty months old. Immediately after the accident the first physician at hand, who happened to be a homeopath, was called in, and he at once administered a large dose of castor oil. Dr. Caro, who was the regular family attendant, was then sent for and came armed with the œsophageal bristle-parachute. On examination of the throat nothing could be seen of the pin, and on introducing the instrument for the sake of exploration, the head of the pin was touched high up in the œsophagus and then slipped down into the stomach. Under the circumstances, considering it highly important that the peristaltic action of the intestines should be controlled, three drops of tinc. opii were administered every three or four hours until the desired result was obtained. As much solid food was given as the child would take. Two days after the accident the bowels moved, when the pin was passed, head downwards, without the least trouble.

Dr. J. C. Peters referred to a similar case which had occurred to him in which a shawl-pin of the same dimensions was passed in four days. In the meantime the patient was fed principally on mush.

Dr. Briddon remarked that he once removed from the neighborhood of the hip-joint a needle which had been swallowed seven years before. He also cited the curious circumstance of a child, thirteen months old, who swallowed a shawl-pin, one and a half inches long, the face or ornament of which was a miniature velocipede and rider. The patient was sent to him by Dr. Aigner. On examining the fauces the foreign body was felt firmly impacted across the glottis. A forceps was introduced and one wheel of the velocipede came away, and it was only after a great deal of difficulty that the entire foreign body was extracted. Notwithstanding the position of the obstruction, there was no difficulty in breathing.

Dr. Knapp believed that so long as a pin had a head there would be no difficulty in its passing through the intestinal canal. The weight of the head was generally sufficient to determine its direction in the long axis of the gut, and if this were not the case and the pin actually penetrated the side of the canal, the head would prevent its going further and the peristaltic action would eventually get the foreign body in the best relative position for passage, viz. with the head downwards.

CENTRAL NECROSIS CAUSED BY EXPOSURE TO COLD.

Dr. Blake presented a specimen of central necrosis of the humerus removed from a dissecting-room subject for the purpose of calling attention to that peculiar eroded condition of the sequestrum, supposed by some pathologists to be due to syphilis. In the case referred to, the patient presented marked evidence of syphilis in other parts of his body, but whether this condition and the eroded sequestrum had any more than a coincidental relation to each other he was unable to say. In fact, his experience had taught him that the majority of cases of central necrosis was due to cold suddenly applied to a limb while in a profuse state of perspiration—for instance, the sudden and prolonged immersion of a perspiring limb in very cold water. In this connection he exhibited a photographic representation of the bones of the leg and foot which were completely necrosed, necessitating an amputation just below the knee. In that case, the patient, a boy, being in a profuse perspiration, was compelled to stand in the flume of a mill for a considerable time to arrange some of the machinery, the water being quite cold. Following this exposure was a sharp attack of periostitis and a complete death of the bones in question. He, Dr. B., also related another case in which necrosis of the humerus followed the sudden immersion of the arm in a mill-pond, the result of a fall from an overhanging tree, and referred in detail to the case of a central sequestrum of the tibia, caused by the exposure of a sweating limb to cold and wet off the coast of Newfoundland while reefing a jib in a storm. In conclusion, he stated his belief that although many cases of necrosis might be referred to syphilis and scrofulous diathesis, there were still a vast majority of such cases which by careful investigation could, as in the instances cited by him, be directly charged to traumatic causes.

Dr. Briddon remarked that such exposures as Dr. Blake referred to would no doubt bring about periostitis in persons of a particular diathesis, but under no other circumstances.

Dr. Blake did not wish to go to extremes, but referred in this connection to the death by phthisis of one of the lions at the Zoological Garden in London. At the autopsy none of the gentlemen appeared to be willing to refer to confinement in the cage as the cause, but persisted in accounting for the disease by assuming that the grandmother of the beast had died of the same disease in South Africa.

(Was there any possibility of proving, however, that the grandmother was not *confined* at some time in South Africa?)

Dr. Briddon referred to the fact, in proof of his assertion, that the same traumatic causes would not produce the same effects on different individuals, else almost every other person one would meet would have necrosis.

Dr. Knapp asked if there had been any explanation offered for the occurrence of central necrosis, and being answered in the negative, suggested the cause to be a thrombus of the blood-vessels of the bone due to the arrest of the circulation in the vessels of the skin.

Dr. Caro remarked that all through Italy the washerwomen carry their clothes a long distance in baskets on their heads, and while in a perspiration plunge into ponds and remain there often up to their knees in water for the greater part of the day, and also referred to the fishermen in that country who stand in the water all hours of the day and night, and in neither of these cases had he learned that necrosis was at all a frequent disease.

DR. BRIDDON stated that he had often known sailors to be exposed for hours together, and while in a perspiration, to the inclemencies of winter weather, and only partially dressed, with limbs soaked in the coldest of water, and yet he did not recollect to have seen a single case of necrosis as the result.

DR. BLAKE submitted that these were hardly parallel cases. A person who had been subject to violent exertion necessitated the production of some fatigue and relaxation of the tissues; it was while in this condition that a sudden impression of cold brought about the attack.

DR. BRIDDON did not doubt the fact that cold could bring on an attack, but he nevertheless believed there was something behind in the shape of predisposition.

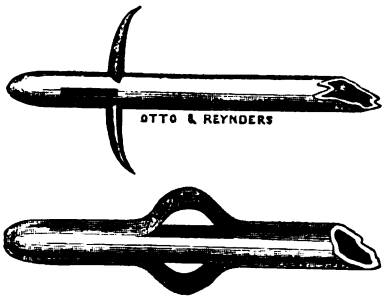
New Instruments.

HEYWOOD SMITH'S SCISSORS.

A SELF-RETAINING CATHETER.

WE have a communication from Messrs. Otto & Reynders with reference to the Heywood-Smith scissors, a description of which we gave in our issue of January 15. These gentlemen say that Mr. Reynders brought these scissors from London on his return from a business trip to Europe, in the summer of 1872, having previously seen them in Brussels. The first ones imported by them were received in May, 1873—were made by Krohne & Sesemann, of London, and consisted of a pair without the apparatus for fixing the joints (as figured in THE RECORD of January 15), and another, the illustration of which we append, in which, as will be seen, a ratchet and screw is so arranged as to render the union of the scissors with the long handles immovable, excepting when the screw is turned. To accomplish this a little key is provided. An illustration of this second variety also appears in the catalogue of Windler, the well-known German instrument-maker.

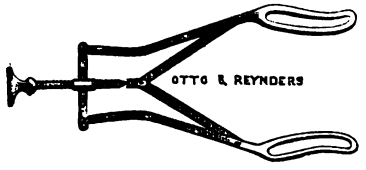
Messrs. Otto and Reynders have shown us an ingenious modification of Holt's "self-retaining catheter." The original instrument, as most of our readers are aware, was kept in place by the two soft rubber wings which projected from the sides of the catheter, near its tip, as represented in the upper one of the two cuts subjoined. While sufficiently rigid to prevent the instrument slipping from the bladder, they do not present any considerable obstacle to its introduction or removal. The modification, which is shown by the second figure, consists in the division of the barrel of a soft catheter at a distance of about half an inch from its tip, into four equal portions, by longitudinal incisions of about half an inch in extent; two of these portions, on opposite



sides, are then stretched by some means, so that they are permanently longer than the other two, and project as seen in the figure. In introducing or removing the instrument it is only necessary to put the shorter ones on the stretch by introducing a sound through the lumen of the tube until it presses against the tip. By drawing on the catheter all of the divisions will then be made to lie flat along the sound, and the instrument can be entered or withdrawn with the facility of an ordinary catheter.

A NEW NASAL SPECULUM.

We give also an illustration (half the real size) of a speculum, invented by a German physician named Henschel, which is intended to dilate the nares in operations upon, or examinations of, the nasal passages. It may be used for one or both nares, and is well adapted, likewise, for examination of the female urethra.



ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from March 19, 1874, *to April* 4, 1874.

PETERS, D. C., Surgeon.—Assigned to duty at Nashville, Tenn., S. O. 43, Dept. of the South, March 21, 1874; and by S. O. 8, Division of the South, March 31, 1874, granted leave of absence for 60 days, on surgeon's certificate of disability, with permission to leave limits of the Division.

WEBSTER, WARREN, Surgeon.—Assigned to duty at Alcatraz Island, Cal. S. O. 29, Dept. of California, March 16, 1874.

HEIZMANN, C. L., Asst. Surgeon.—Relieved from duty with Sioux Expedition, and to resume his duties as Post Surgeon at Fort McPherson, Neb. S. O. 42, Dept. of the Platte, March 23, 1874.

HALL, J. D., Asst. Surgeon,—Granted leave of absence for 30 days—to take effect when a relieving medical officer shall have reported at Fort Benton. S. O. 56, c.s, Dept. of Dakota.

Medical Items and News.

AMERICAN MEDICAL ASSOCIATION.—The Twenty-fifth Annual Session will be held in the city of Detroit, Mich., on Tuesday, June 2d, 1874, at 11 A.M.

"The Chairmen of the several sections shall prepare and read, in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective sections. . . . ."—By-Laws, Art. II., Sect. 4.

Sections.—*Practice of Medicine, Materia Medica, and Physiology:* Dr. N. S. Davis, Chicago, Illinois, Chairman. Dr. Geo. E. Frothingham, Ann Arbor, Mich., Secretary.

Obstetrics and Diseases of Women and Children: Dr. Theophilus Parvin, Indianapolis, Ind., Chairman. Dr. Montrose A. Pallen, St. Louis, Mo., Secretary.

Surgery and Anatomy: Dr. Samuel D. Gross, Philadelphia, Pa., Chairman. Dr. Alonzo Garcelon, Lewiston, Me., Secretary.

Medical Jurisprudence, Chemistry, and Psychology: Dr. A. N. Talley, Columbia, S. C., Chairman. Dr. E. Lloyd Howard, Baltimore, Md., Secretary.

State Medicine and Public Hygiene: Dr. A. Nelson Bell, Brooklyn, N. Y., Chairman. Dr. A. B. Stuart, Winona, Minn., Secretary.

"Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the Secretary of the appropriate section at least one month before the meeting which is to act upon them. It shall be the duty of the Secretary to whom such papers are sent, to examine them with care, and, with the advice of the Chairman of his section, to determine the time and order of their presentation, and give due notice of the same. . . . ."—By-Laws, Art. II., Sect. 5.

The following Committees are expected to report: On Cultivation of the Cinchona Tree: Dr. L. J. Deal, Pennsylvania, Chairman. On the Treatment of Fractures: Dr. Lewis A. Sayre, New York, Chairman. On Gynæcology: Dr. M. A. Pallen, Missouri, Chairman. On some Diseases Peculiar to Colorado: Dr. John Elsner, Colorado, Chairman. On Rank of Medical Corps of the Army: Dr. J. M. Keller, Kentucky, Chairman. On Prize Essays: Dr. G. K. Johnson, Michigan, Chairman. On the Progress of Otology: Dr. D. B. St. John Roosa, New York, Chairman. On American as compared with Foreign Winter Cures: Dr. H. R. Storer, Massachusetts, Chairman. On Railroad Injuries: Dr. W. F. Peck, Iowa, Chairman. On the Therapeutics of Ammonia: Dr. P. J. Farnsworth, Iowa, Chairman. On the Relation of Physiology to the Practice of Medicine: Dr. E. W. Gray, Illinois, Chairman. On Puerperal Fever: Dr. W. O. Smith, Kentucky, Chairman. On the Legal Relations of Moral Insanity: Dr. E. Lloyd Howard, Maryland, Chairman.

The following amendments to the Plan of Organization are to be acted upon:

By Dr. N. S. Davis, Illinois:

Strike out the second paragraph of Art. II. and insert the following:

"The delegates shall receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies as are recognized by representation in their respective State Societies, and from the Medical Department of the Army and Navy of the United States."

Also, strike out the fourth paragraph of same Article, and insert:

"Each State, County, and District Medical Society, entitled to representation, shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number."

"The Medical Staffs of the Army and Navy shall be entitled to four delegates each."

By Dr. P. Pineo, of Massachusetts:

Art. II., second paragraph, after "Army and Navy," insert "and the Marine Hospital Service of the United States."

By-Laws, Sect. 6, after "the chiefs of the bureaus of the Army and Navy," insert "and the supervising surgeon of the United States Marine Hospital Service."

By Dr. E. L. Howard, Maryland:

Art. IV. Strike out second clause of first paragraph, and insert:

"They shall be nominated by the Judicial Council, and shall be elected by vote on a general ticket."

By Dr. A. S. Maxwell, of Iowa:

"*Resolved*, That in view of the many and important duties imposed upon the Nominating Committee, the Medical Society of each State and Territory that elects delegates, be requested, when selecting delegates, to nominate one member of such delegation as their member of the nominating committee, and also designate the mode of filling vacancies."

By Dr. A. M. Pollock, of Pennsylvania:

Art. VI., first paragraph, strike out the word "five" and insert "ten."

By-Laws, Art. 5, first paragraph, strike out "five" and insert "ten."

Secretaries of all medical organizations that have adopted the Code of Ethics are respectfully requested to forward to the undersigned a complete list of their Officers, with their Post-Office addresses, and the number of their members in good standing. This is the only guide for the Committee of Arrangements in determining as to the reception of delegates.

It will also enable the Permanent Secretary to present a correct report of the Medical organizations in fellowship with the Association.

WM. B. ATKINSON, M.D., Permanent Secretary.

BRAITHWAITE'S RETROSPECT.—In the issue of March 2d, in THE MEDICAL RECORD, was inadvertently printed, "*Braithwaite's Retrospect* had ceased its existence with the January number." It should have read "*Rankin's Abstract.*"

RECEPTION HOSPITALS—APPOINTMENTS.—The following appointments have been made by the Commissioners of Public Charities and Corrections, upon the recommendation of the Board of Examiners (Drs. Hamilton, Sands, and Loomis).

Park Reception Hospital.—M. B. Earley, M.D., House Surgeon; Wm. B. Hull, M.D., First Assistant; M. L. Wengler, M.D., Second Assistant (*Externe*); T. E. Wilson, M.D., Ambulance Surgeon.

Ninety-ninth Street Reception Hospital.—W. N. Campbell, M. D., House Surgeon; A. H. Gorlet, M.D., Assistant; C. A. Nolan, M.D., Ambulance Surgeon.

All of whom entered upon their duties on the first day of April.

BELLEVUE HOSPITAL.—The question of expediency regarding the reconstruction of Bellevue Hospital on the pavilion plan is again being agitated. Every one interested in hospital management would be glad to see this done.

Medical Department of Life Insurance.

WHAT EFFECT DOES SYPHILIS HAVE UPON THE DURATION OF LIFE?

By FRED. R. STURGIS, M.D.,

ASSIST. SURG. MANHATTAN EYE AND EAR HOSPITAL, N. Y. CITY.

PART II.

Hereditary predispositions.—Any inherited taint, whether tubercular, scrofulous, or otherwise, will undoubtedly be more or less affected by this disease, and will perhaps be accelerated by it, and vice versa. But what I wish especially to dwell upon now, is, what effect congenital syphilis would have upon the duration of life.

The larger proportion of deaths from syphilis occur in subjects under five years of age; indeed, if we may rely upon the published statistics, the average mortality is nearly 85 per cent. for New York City and over 63 per cent. for Philadelphia. This in the former city embraces a period of six years, in the latter of twelve. For the year 1871, in New York City, out of a total of 142 deaths from syphilis, 120 occurred in children under 5 years of age; in Philadelphia, out of 19 deaths, 12; and in London, out of 352 deaths, 314. Let us see, out of the remaining deaths, how many occurred before the thirtieth year was completed. In New York City, out of a balance of 22 deaths, 12 died before the 31st year.

In Philadelphia, out of a balance of 7 deaths, 2 died before the 31st year.

In London, out of a balance of 38 deaths, 21 died before the 31st year.

It is probable that the cause of the large proportion of deaths between the age of five, and before the completion of the thirtieth year, is indirectly due to the influence which puberty exercises upon the development of the later symptoms of hereditary syphilis, and this view seems to be supported by the opinion of a recent French writer. He says: "Puberty in both sexes, and pregnancy and the menopause in women, like most diseases, play the part of occasional causes. The age of puberty is a time at which cases of late hereditary syphilis hardly ever fail to show themselves. Menstruation, and especially the menopause, act in the same manner as do pregnancy and childbirth, and like those two conditions, tend to favor the appearance of syphilitic lesions." *

I have taken the limit of thirty years, and assumed that the cases which proved fatal within that time were due to hereditary causes, and in this course I think I am justified for the following reasons: 1st, That the time during which syphilis is *acquired* is generally between the ages of twenty and thirty, a period when the disease is less likely to prove fatal, from the patient being better able to withstand the debilitating effects; and 2d, Because the disease seldom kills so rapidly as in ten years, and then only in exceptional cases. What the cause of death was in those who died under five years, will, I scarcely think, be questioned; it is not likely to have been from acquired disease, unless these infants were strangely precocious in their tastes and habits.

Out of those who died between 5 and 30 years of age, 4 died in New York between the ages of 5 and 20, and 8 between 20 and 30. The first set (4) we may at once dispose of. It is very unlikely that death would have been caused from syphilis acquired between the ages of 5 and 20. Of the remaining 8, between 20 and 30, although it is not so clear, it is still sufficiently improbable to cause doubt; so that we then have 10 deaths left which we can fairly ascribe to acquired syphilis. Of these, 6 died between 30 and 40, 2 between 40 and 50, and 2 between 50 and 60.

The Philadelphia record stands thus: Out of those who died between 5 and 30 years of age, 2 died between 20 and 30, leaving 5 deaths from acquired syphilis; of these, 2 died between 30 and 40, 2 between 50 and 60, and 1 between 60 and 70.

The London record is as follows: Out of those who died between 5 and 30 years of age, 6 died between 5 and 20, and 15 between 20 and 30, leaving 17 deaths from acquired syphilis; of these 5 died between 30 and 35, 7 between 35 and 45, and 5 between 45 and 55.

To sum up, therefore, we may say that hereditary syphilis does, up to the age of 20 at least, shorten the expectation of life, and probably up to that of 30.

Thus far, my dear Doctor, I have, as carefully and correctly as the means at my disposal allowed, tried to answer the questions you have put me, and am almost disheartened when I look back and see how evasive and vague the replies have been; but should this article elicit more carefully compiled statistics and more direct and accurate knowledge of the effects syphilis has upon the duration of life, I shall feel compensated for my time and trouble.

This brings us to the third division of your list of questions, which reads:

"In what way does syphilis shorten life?

(*a*) "Does it do so through the development of some of its own peculiar lesions, and if so, to what extent?

(*b*) "Does it render a person more liable to other diseases, as, for instance, the inflammations—meningitis, pneumonitis, pleuritis, and carditis?

(*c*) "Does it favor those diseases which are due to a degeneration of the walls of the blood-vessels—apoplexy, aneurism, valvular disease of the heart?

(*d*) "Does it favor the development of those changes in the brain or spinal cord whose manifestations go by the name of 'insanity,' 'epilepsy,' 'anæsthesia,' etc.?"

There is no tissue of the human body which is not liable, in the course of the disease, to become attacked; so that in the advanced stages of syphilis any one of the forms which you have mentioned may and do occur; thus we find a syphilitic meningitis and a syphilitic pleuritis, a specific neuritis as well as specific mania, epilepsy and arteritis—in short, each non-specific ailment has its specific counterpart. To answer your question as to how these cause death, let me discuss the pathology of syphilis. In a few words, it is this—infiltration, exudation, and molecular destruction. These destructive changes, which go on more rapidly and fatally the older the date of the disease, are usually accompanied by changes of assimilation and nutrition. Bearing in mind what an exhausting disease syphilis is, even from its inception, and what changes it induces in the blood-cells themselves (witness Ricord's and Grassi's researches in that direction), we can the better understand how it may fatally undermine the general health, and produce death by exhaustion. You will remember, in recording the causes of deaths from syphilis in the London hospitals, what a prominent part this same exhaustion played—indeed, we might call it an exhaustive poisoning. These later stages, the so-called tertiary and quaternary, are especially marked by deep and chronic destruction, which makes them especially dangerous, and, when associated with changes in assimilation, well-nigh hopeless.

We may, therefore, sum up the evidence as follows:

* Lancereaux, op. cit.

1. Syphilis destroys life from exhaustion, and non-assimilation, due to a poisoning.

2. To a certain extent it does render a person more liable to other diseases, as, for instance, the inflammations; but it does so in this way, by the deposition and breaking down of its own peculiar products in the tissue of the organ attacked, and only indirectly by destruction of the tissue proper of the part.

3. In the same way it favors the development of those changes in the brain or spinal cord whose manifestations go by the names "insanity," "epilepsy," etc.

Now, although all syphilitics are *liable* to be attacked by the later stages, fortunately they, practically, do not go so far; and my own experience leads me to believe that only a small proportion of those who contract the disease suffer afterwards from the tertiary manifestations. This would also seem to be the opinion of M. Landrieux, of Paris, who, in an interesting memoir on "Les Pneumopathies Syphilitiques," says: "Suivant toutes vraisemblances, c'est une manifestation rare de la syphilis, ainsi du reste que toutes espèces d'accidents tertiaires, ce qu'on doit mettre sur le compte des traitements bien dirigés, et sur ce que, chez beaucoup d'individus, le virus s'épuise, disparait de l'organisme."

Your next two questions, my dear Doctor, I shall take the liberty of condensing into one, as they require pretty much the same answer, and that one I shall put into the shape of a few rules, to guide the medical examiner in determining when to, and when not, recommend a syphilitic risk for life assurance.

1. It is, as a rule, better not to insure any patient in whom the disease is still present, no matter how light the symptoms may be, for you cannot predict accurately what may occur.

2. This, however, does not argue that the same man may not, after he has recovered from his disease, be a good risk. You see, Doctor, I believe syphilis to be a curable disease. The average time allowed for recovery is two years; of course some will need more, some less. Then allow two more years from his last symptoms before becoming a candidate for life assurance; in other words, four years from the date of his disease. This will answer for the majority of cases where the disease has been of medium severity; where the patient's history points to an advanced stage, let three years have elapsed from his last symptoms until his examination.

3. Be especially careful to ask the date of the last symptoms and their character, for the older the date, and the lighter and more superficial the symptoms, the less risk on the life assurance.

4. Persons with a family history of tuberculosis, cancer, and such hereditary diseases, are, at the best, I believe, considered shy cases. They are doubly so when they have had syphilis of an advanced type, *e.g.*, nervous, visceral, or ulcerating syphilis. If their disease have been mild, with the two years' period of recovery above mentioned, *the syphilis* need not stand as a bar to their insurance.

5. Not so, however, those who are the subjects of hereditary syphilis. They are rotten "ab ovo usque ad mala," and if not actually presenting the symptoms of their congenital disease, their vitality is impaired, their nutrition often imperfect, and they are prone to succumb to almost any extra strain which may be imposed upon them. Better have nothing to do with them. And—

6. Inasmuch as patients are proverbially prone to deceive the examiner under such circumstances, not from wilfulness only, but from ignorance also, obtain, so far as you can, a certificate from the physician under whose care they were for the disease.

16 WEST 32D STREET, NEW YORK.

THE MEDICO-LEGAL ASPECTS OF LIFE INSURANCE.*

BY EDWARD HENRY SIEVEKING, M.D.,

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS; PHYSICIAN TO ST. MARY'S AND THE LOCK HOSPITALS; PHYSICIAN EXTRAORDINARY TO THE QUEEN, ETC.

A FEW points, and among them some that especially bear upon the medico-legal aspects of life insurance, and which have not found a place in the previous chapters, remain to be considered.

It is not customary among respectable offices to underbid one another; therefore previous rejection at another insurance company militates strongly against the acceptance of a life. At the same time it would be cruel not to take a life into consideration that proposes in proper form, and it necessarily happens not only that different views may prevail as to the importance of certain indications, but also that circumstances may have occurred since the rejection which might justify a favorable interpretation of adverse features. In many morbid conditions time effects material improvements, and residuary affections which once threatened danger may have disappeared altogether, or have assumed so quiescent a form as to present no unfavorable symptoms. Thus, a person recently recovered from a pleuritic seizure might be deemed ineligible within six weeks of his illness, but after a year or more, the health might and probably would be so perfectly restored as to remove all objections, unless some past indications of morbid action had arisen. Another suffering from a paralytic affection, consequent upon diphtheria, would be unacceptable while there was any trace of paralysis, but admissible when all nerve symptoms had been removed. Instances of this kind might be indefinitely multiplied.

On the other hand, previous acceptance by any office does not supersede the necessity of a strict scrutiny, when the same individual again proposes to insure. The lapse of a few years very frequently reveals new features which give the case a totally different aspect. Parents, or other relations previously in good health, may have died, and their fatal illnesses may show a taint which was not before manifest. The applicant may himself have suffered from illnesses exhibiting an hereditary predisposition that would diminish his expectation, or he may have become the subject of morbid influences affecting vital organs of a different character, equally impairing his prospect of longevity. It is so much the custom of English offices to interchange their experiences with regard to their policy-holders, that a certain solidarity exists between them, and a comparison of papers and the contained statements not unfrequently exhibits discrepancies, which afford considerable assistance in estimating the value of a life. Thus, a short time since, a life was proposed to an office and reported upon by an examiner of eminence. The proposer stated that he had suffered from an attack of rheumatism. A reference to the medical attendant proved this to have been a severe attack of rheumatic fever, for which seven years extra were charged, but the proposer not agreeing to these terms, the proposal was not completed. Another

* Reprinted from the author's recent work, entitled "The Medical Adviser in Life Assurance." London: J. & A. Churchill, New Burlington Street. 1874.

Orders may be sent to Wm. Wood & Co., 27 Great Jones street.

equally careful office having taken the life at the tabular rates, a comparison of the papers of the two companies showed that the proposer, having ascertained the weak point in his case, had stated in his replies to the second office that his rheumatic fever was "slight rheumatism," and that he had required no medical attendant. Applicants even unintentionally are apt to exhibit considerable obliviousness of matters connected with their own health or that of their relations; it is therefore useful to be able to remind them of statements made on a former occasion, and to compare accounts given at different periods. Wherever there is a suspicion that there has been any attempt to deceive and make a fraudulent or a highly colored statement, the application had better be refused altogether, as one such intentional error would necessarily more or less invalidate all other averments, and in case of future disputes, make the company a particeps criminis, if it could be shown to have connived at the fraud by knowingly accepting a life offered under false pretences.

The physician has an important interest in the medico-legal aspect of life assurance, and to estimate that fully, it may be worth while to refer briefly to what the life-assurance contract realizes, and in what terms the contracting parties enter into it. In all ordinary cases a person, either of his own accord or at the suggestion of others, comes to an insurance company and offers to pay an annuity or yearly sum during his life, if the company will undertake to pay his representatives a certain sum by way of reversion after his death. This being the chief condition of the contract, it remains to settle the two sums. The one, the proposer determines himself by naming the amount for which he wishes to be assured. The other is fixed by the office on the faith of certain statements made by the proposer, and of a medical examination to which he subjects himself. This examination, however carefully or ably made, must be incomplete without the statements comprising the age, the habits, and the personal and family history of the applicant. If these statements are not made fairly and truly, one of the contracting parties, *i.e.*, the assurance company, is induced to enter into the contract in ignorance of its exact nature. Of the three subjects just mentioned, the age is capable of positive proof, and offices, therefore, take the statement of the age for granted, subject to subsequent evidence of correctness; but particulars as to habits and history can only be obtained on the faith of the proposer. Some persons are under the impression, that the undergoing a medical examination relieves them from the responsibility of giving false information on these points, but this is an error. One of the greatest authorities on the Law of Life Insurance* quotes the opinion of a learned judge on the subject to the following effect: "Not only must the party proposing the insurance abstain from making any deceptive representation, but he must observe the utmost degree of good faith, *uberrima fides*. Not only is he required to state all matters within his knowledge which he believes to be material to the question of insurance, but all which in point of fact are so. If he conceals anything which he knows to be material, it is a fraud; but besides that, if he conceals anything which may influence the rate of premium, which the underwriter may require, although he does not know that it would have that effect, such concealment entirely vitiates the policy. An entire disclosure must then be made of all material facts known to the assured; and not only so, but all representations made by him as to material facts must be substantially correct; and to this may be added, that where a representation amounts to a warranty, it must not only be substantially, but literally true."

For convenience, the assurance offices have adopted a form called a declaration, on which the requisite information should be given. This form is usually annexed to the form of the medical report; and although some offices incorporate it with the report, and leave it to the medical examiner to put the questions and write down the answers as they are given by the applicant, the majority of the offices—while they annex one form to the other, thus recognizing the necessity that the medical adviser should have the applicant's replies before him in order to enable him to fill up the other properly—make the declaration a distinct document, which has to be signed by the proposer. The declaration generally has the following words, or something to the same effect, at the foot: "I declare the above statements to be true, and admit them as the basis of my contract with the —— Company." The questions in this declaration are generally read over to the applicant by the physician, and the former appends his signature to the answers after they are taken down.

The modern custom appears to be to put a distinct question as to each important disease of ordinary occurrence, and the questions doubtless appear to the inexperienced to be unnecessarily numerous. But this is quite as much in the interest of the proposer as of the office, and to prevent the former from forgetting any fact that ought to be mentioned. At the same time the responsibility of giving full information rests with the proposer, as laid down in the quotation previously given from Mr. Bunyon's work. He subsequently* adds the following authoritative statement: "If the proposer leads the insurers into error by inducing them to compute their risk upon circumstances not founded in fact, so that the risk actually run is different from that intended to be run, the contract is as much at an end as if there had been a wilful and false allegation, or an undue concealment of circumstances."

This being the law, it appears to be the duty of the medical examiner to protect both the proposer and the office from the results of its being broken. In practice, offices rarely dispute the payment of a policy, unless fraud of a most glaring and deliberate kind has been committed; but it cannot be doubted that frauds are practised upon them, and that by the withholding or misstatement of certain facts, directors are frequently led to pass lives at the ordinary rate, when they ought to have been charged an extra premium. Take a case like the one previously alluded to, where a proposer had been affected with rheumatic fever, and who states he had only had a slight attack of rheumatism. The former, assuming the proposer's age to be thirty, would necessitate an extra charge of seven years, while the latter would not render an addition necessary. The fraud here consists in the value of the difference in the premiums, or an assurance for £1,000 (say Carlisle four per cent.) = £78 6s. Or, in the case of a man whose mother died of consumption, but who states that she died after childbirth, there ought to be an addition of ten years; and if, in consequence of his false statement, he is taken at the ordinary rates, the office is defrauded of £125 12s.

Hence, it should be the duty of the medical man to impress upon the proposer the necessity of truth and exactness, and to cross-examine him on any point on which he fails to reply frankly and satisfactorily.

* A Treatise upon the Law of Life Assurance, by C. J. Bunyon, M.A., p. 30. London, 1854.

* Loco citato, p. 33.

Some people think it no harm to benefit themselves at the expense of a public company, but by the prevailing constitution of assurance societies, by which a large majority of the policy-holders are assured on the system of participating in the profits, the injury done affects the members, and each one bears his proportion of it.

Another point in connection with the subject under consideration is the relation of the private medical attendant. One of the questions addressed to a proposer is: Who is your ordinary medical attendant? and many controversies have arisen on the answer given. It is clear there is room for serious frauds here, as experience has shown. It is the custom in one London office always to constitute the private medical attendant its own examiner *pro tempore*, and to give an additional fee in consequence. The definition of what constitutes a private medical attendant is given in the papers of the office in question, thus: The medical man who has most frequently attended the life proposed.

Life assurance now being widely diffused over the country, this plan would be practically adopted by many offices, for in small towns and villages it must often happen that the medical examiner is also the medical attendant of the proposer. But in populous towns and districts this is less likely to happen, and we are then driven back to the question. The reply would necessarily yield the name of the practitioner who could give the most complete information regarding the proposer. It might happen that a candidate for insurance had been attended by one medical man for a dangerous illness most prejudicial to longevity, and soon after by another for some trifling ailment. To name the latter as the ordinary medical attendant might be a compliance with the query in its literal sense, but certainly not with its spirit. In the case of *Everett* versus *Desborough*,* it was laid down that a reference to a person who immediately before the time at which the policy is effected has been casually consulted for trifling maladies, will not satisfy the requisition for a reference to the usual medical attendant, although the person who had formerly attended may have retired from practice at the time.

We cannot put the matter in a clearer and more succinct form than by laying before our readers the following further extract from Mr. Bunyon's work, which seems to comprise all the legal bearings of the subject:

"The meaning of the question 'Who is your usual medical attendant?' was elaborately considered in the case lastly referred to (*Everett* v. *Desborough*). 'What is the grammatical sense of that question?' observed the Court: 'It is in the present tense.'" Suppose a person goes to effect a policy on his life, who had no medical attendant in the last year; if the answer to the question were, 'I have no such medical attendant,' must not that question of necessity be followed by another, which is, 'Who was your former medical attendant?' The terms and nature of the question prove that it was designed to extract from the person *who is the medical attendant best able to give an account of her constitution at the time;* and if she has no usual medical attendant in the precise grammatical sense of the question, it appears to me that she is bound to mention who is the medical attendant who could give that information. The facts of the case appear to be, that this lady had been attended by Mr. Duck, her medical man at Bristol, for a considerable time during several years, and down to the time of her marriage in December, 1832. Previously to her marriage she had made one or two attempts to effect a policy on her life, and Mr. Duck had been referred to as her medical attendant, and on his representations the parties with whom it was proposed to effect the insurance had declined the risk. She was married in December, 1832, and it was stated that from that time Mr. Duck ceased to attend her, but that a gentleman of the name of Day, who had been attending her husband and was the usual medical attendant of the family, upon one or two occasions, not being called in to attend her expressly, but incidentally calling, had given her some slight advice of such little note that he had made no memorandum of it in his book. When called upon to answer the question, she replied, 'Mr. Day,' who being examined by the company's agent, said she was perfectly well for aught he knew, and that he had never attended her professionally at all; and on trial, that he had attended her once or twice; he was not sure that he had attended her a second time, but he had once or twice given advice to her. The question was left to the jury to say whether Mr. Duck or Mr. Day was her usual medical attendant; but it appears to the Court that there was another question behind, namely, whether, from the peculiar circumstances under which Mr. Day was introduced to her notice, he could be called her usual medical attendant at all. It appears to us that it should have been laid down to the jury, that, if she was aware that the person whose name she gave could not be the proper person to render the account that the defendant wished to have of her, it was her duty to have mentioned the circumstance, and to have stated that although Mr. Day was a person to whom they might refer, he was not the usual medical attendant, but that the usual attendant had been Mr. Duck. To illustrate this, suppose Mr. Day had never attended her at all, but that when she married she ceased to have any medical attendant; suppose she had answered, 'I have no usual medical attendant,' that answer would have been followed by the question, 'But had you ever any usual medical attendant?' She must have known that the question was intended to elicit from her an answer designating the person who could give the best information respecting the state of her constitution."

It is well known that for a long time a controversy was carried on between the life offices and the medical profession on the subject of medical fees. It was urged by the former that a proposer for an assurance was bound, as a person selling a property, to prove his title at his own cost, but that the company had the right to make all needful requisitions. On the other hand, it was argued that if so, the medical man, being in the pay and interest of the proposer, was rather his advocate. This contest has now ended. The offices admit that the medical man, if asked to report, does so in their interest, and should be paid by them. It has been suggested that the sympathies of the private medical attendant are on the side of his patient; but practically, if this is the case, it is not found to warp his judgment and to induce the return of false statements. If he allowed his feelings or prejudices to guide him, it is the more necessary that he should be acquainted with the clear injunctions of the law as to his duties, which are calculated to induce him to be perfectly frank, and to make a full statement of everything within his knowledge that is at all likely to affect what is termed the basis of the contract of life assurance. Anything like reservation clearly jeopardizes the entire transaction, and places the policy-holder at the mercy of the company.

The medical officer of an insurance company has an

* Bunyon, *loc. cit.*, p. 44.

important office to fulfil in examining the claim papers; he has to satisfy himself of the nature of the evidence of death, and he ought especially to inquire into the causes of the fatal issue. In doing this he would have three objects in view: first, to ascertain that the death is attributable to natural causes; second, to determine whether there is any discrepancy between the statements of the late policy-holder, regarding his health and the fatal disease; and third, to extract from each individual case any information that may avail him in judging of future lives to be submitted to his judgment.

A death from natural causes excludes the idea of suicide, which almost universally invalidates a policy; though for our part we are strongly of opinion that, unless suicide is committed within a certain space of time from the date of the first issue of the policy, it ought to be regarded like any other accident, to be provided for by the rates of insurance.

The number of suicides in England in 1871 was 1,495, of which 1,103 were males, and 392 females; the average for London alone from 1846–1850 was about 240 annually, of which less than half were females. The proportions manifestly vary somewhat in town and country; the total number for London in 1871 was 207; therefore, considering the vast increase of the population during the last twenty-five years, this looks like improvement. Suicides occur chiefly in the middle and upper ranks of society, whose position and property fluctuate much more, involving greater anxiety and mental distress than is the case among working classes; hence, although the proportion to the entire population is small, the proportion falling upon insurance companies, which are chiefly resorted to by the former, is comparatively large. This is further corroborated by the table quoted from Mr. Smee, Junior, at page 117, where the deaths from violence, which include suicides, are found to constitute a high ratio, though this of course is imperfect evidence, as we have not the numbers of deaths from other causes included under the head of violence. Judging by the evidence at our disposal, it appears that five claims in 1,000 are due to suicide. Suicide is a direct result of what is termed civilization. The proportion which it bears to the population exhibits a close ratio to the advance of education and wealth. It is generally larger in towns than in the country. Casper,* the great German medico-legal authority, gives the following table as the result of his inquiries into the frequency of suicides in certain towns of importance:

	No. of suicides to 100,000 inhabitants.	One suicide to number of inhabitants.
Copenhagen	100	1,000
Paris	49	2,040
Hamburg	45	2,222
Berlin	34	2,941
London	20	5,000
Elberfeld	20	5,000

Quetelet also gives the authority of his imprimatur to the following quotation from Balbi,† which the reader may like to refer to as bearing upon the general social aspect of suicide. The data appear to have been collected in or about 1827.

The number of suicides were, in

Russia,	in the proportion of one to			49,182	inhabitants.
Austrian Empire,	"	"	"	20,900	"
France,	"	"	"	20,740	"
Philadelphia,	proportion of one to			15,875	inhabitants.
Prussia,	"	"	"	14,404	"
Baltimore,	"	"	"	13,656	"
Boston,	"	"	"	12,500	"
New York,	"	"	"	7,797	"

To the list of the sad sequelæ to intemperance we have also to add suicide, with which it is too often found associated. Dr. Farr has shown that the professions peculiarly addicted to drunkenness have more than their due proportion of suicides. "Drunkenness," he says, "leads to this, but drunkenness is a sort of indirect suicide, and both are tendencies of the mind indulged often from the same motives, and promoted by similar causes; for in drunkenness the wretched find not only the gratification of an appetite, but the suspension of natural consciousness—in death they seek its cessation." To pass from these general statistics to the consideration of the subject immediately before us, it may be stated that it is not always easy to determine whether an individual has died by his own voluntary act or not; and as insurance companies shrink from contesting their liability, although under their contract fully empowered to do so under certain conditions, owing to the odium which they incur, unless they are certain of being able to prove the correctness of their suspicions, it is tolerably certain that a considerable number of claims have been paid, although life had been terminated by suicide. A claim of this kind lately came before us, where morally there could scarcely be any doubt that a captain, who, without adequate motive, not only refused to leave his sinking ship after his mate and all the sailors had taken to their boats, but even lay down in his berth, and declined urgent solicitations to escape from certain death, was guilty of suicide; yet the company consented to pay the policy, owing to the conviction that a jury would certainly have looked upon him as a martyr and a hero. Most persons of any experience in these matters will probably recall more marked illustrations of this feature in life insurance.

However, we repeat that we would not even allow well-proven suicide to invalidate a policy after a lapse of say five years, because it is not to be supposed that any one would take out a policy with the view of defrauding the company so long beforehand, because it is generally desirable to fix a time at which all policies become absolutely indisputable, and because there is sufficient evidence to justify the belief that suicide is generally the consequence of a morbid condition of the body or the mind, or both. If all insurance companies agreed to adopt some principle of the kind, and resolutely acted upon it, the temptation to this species of fraud would be removed, and the poor survivors would not lose what in these cases is often their only stay.

A certain amount of sympathy cannot be denied to persons who, with the intention of benefiting those dear to them, make away with themselves. The moral obliquity which is associated with suicide is often to be interpreted as a perversion of one of our best feelings; and the individual who commits the act doubtless thinks at times that he is committing an act of self-sacrifice for the good of others. The anxiety and distress which commonly lead to self-destruction are generally an efficient cause in overthrowing the balance of the mind, and if we cannot agree with the almost universal verdict of juries, that "temporary insanity" palliated the deed; neither can we doubt that before a higher tribunal an intimate knowledge of the physical and moral circumstances surrounding the case would, in many cases, conduce to a verdict that it belonged rather to the category of disease than of crime.

* Quoted by Quetelet, Sur l'Homme, vol. ii. p. 147. See also two valuable papers on suicide, by Mr. Jopling, in the Assurance Magazine, vols. i. and ii.

† "La Monarchie Française comparée aux principaux états du globe."

But if a sentiment of pity softens the asperity of our feelings with regard to the individual who defrauds the insurance company by taking away his own life, no expression of condemnation can be too strong to apply to those who, for the sake of this species of gain, contemplate and carry out the destruction of others. Unfortunately, our records exhibit many instances of this form of crime; wives, parents, brothers, friends, have been insured and murdered for the sake of the proceeds of the policy. In the lower ranks of life, burial clubs have been repeatedly shown to act as incentives to crime of the same kind. All through society, therefore, it behoves the medical man to be on his guard, that he may detect any indication of a life having been tampered with. In this respect he cannot refuse to watch over public morality; and in connection with life insurance, he has the further motive, if any be required, that other important interests are committed to his charge, and that the discovery of this form of crime rests especially with him.

In conclusion, we would express a hope that we have conveyed to our medical readers, throughout, the high moral responsibilities which they incur in undertaking the work which legitimately pertains to them in connection with life insurance. Although we have had occasion to advert to the possibility of shortcomings in members of the medical profession, our general experience, now of many years' duration, of the work done by them, justifies the assertion, that as a rule they act upon the principle enunciated in the passage which Shakspeare puts into the mouth of one of his chief characters:

> "'Tis not my profit that does lead mine honour,
> Mine honour, it."

Life insurance involves interests of the greatest importance to the individual and to society; and here, as in many other matters affecting the welfare of humanity, the medical man is one of the chief guardians of social morality and civilization. The more fully he realizes the elevated aims that he should aspire to, the more he aids his fellow-man in his onward progress, and the more he fulfils the great obligations which he takes upon himself in joining the noblest and the most unselfish of all professions.

MEDICAL EXPERTS IN THE SELECTION OF LIVES.

BY A MEDICAL DIRECTOR.

It is probably known only to a few members of the medical profession, that a majority of the prominent life-insurance companies have recently organized themselves into an association bearing the name of the Chamber of Life Insurance.

The central idea of this association—if we are rightly informed—is to obtain concerted action in all matters which tend to promote life insurance interests in the abstract. Thus, for instance, the chamber is discussing, among other things, the advisability of having but one list of medical examiners. The mere fact that the suggestion of such a project emanates from the executive, and not the professional department of life insurance, indicates a great step in advance toward the establishment of proper relations between the medical profession and the managers of life companies.

The notion, which many life insurance officers still entertain, that it is not quite safe to have an applicant examined by the regularly appointed medical examiner of a rival company, is utterly wrong, as it implies a degree of corruptness among physicians which the facts have never justified.* The action of the chamber, however, casts aside this imputation, by deciding that hereafter the function of the medical examiner is to be purely that of an expert in the selection of lives, and that in the performance of this duty he can be trusted to treat all companies impartially. If, then, our information be correct as to the coöperative plan which the chamber proposes to introduce, we can only wish it full success in carrying out the necessary steps to accomplish this important radical change, for we believe that it is the only way in which the profession, as a body, can be brought into closer and more responsible relationship with the business of life insurance. To appreciate the benefits to be expected from such a change, we must glance at the present status of things.

Take, for instance, a town of some three or four thousand inhabitants. Here we shall find from six to twelve physicians in more or less active practice. The most prominent among them is probably the medical examiner for three or four of the best life companies, who have taken the pains to find out the relative standing of physicians in that place. But all the other physicians in the place—be they professionally good, bad or indifferent—are also medical examiners for various companies, and probably receive at least a full share of this sort of patronage.

Now what is the practical result, we would ask, of this indiscriminate examination of lives for insurance? Does it not endanger the financial prospects of the company, and does not the distribution of this professional patronage among so many physicians tend to alienate the better men among them, or at least to weaken their interest in and sense of responsibility toward the companies? We certainly believe that the existing wide-spread indifference of physicians to insurance matters, is due in great measure to the lack of constancy manifested by the home offices, in their dealings with the physicians whom they employ. On the other hand, the amount of patronage which any one company can confer in a small town is not sufficient to establish the desired closeness of relationship between the physician and the home office. But let the entire business of this town be given to a single physician, who shall be known as the "Medical Examiner to the Associated Life Insurance Companies," and we believe there will no longer be any difficulty in securing the best medical examiners the country affords, and in infusing into them that sense of responsibility which "Secretary" misses so much in the average examiner. The position will then be worth having, and will no longer go a-begging, as it now sometimes does. In some instances, too, it will be within the power of the Association to establish a suitable physician in places where a competent and trustworthy medical examiner cannot be found; for the patronage which they can assure him will be sufficient to bridge over the first year or two of waiting. In some of the larger towns and smaller cities, the Association will probably find it to their pecuniary advantage to pay the physician a regular salary, and require him to hold insurance office-hours in some central part of the town. It is only by the adoption of some system like this that the companies can ever

* The writer has seen letters from agents, complaining that the applicants whom they had secured with great difficulty were rejected by the physician, simply in order that the risks might be placed in the company of which he was the regular examiner! If this be true, the company has only itself to blame for employing physicians who are willing to act the double part of agent and examiner, even at the expense of their consciences.

expect to educate a large number of experts in the selection of lives. As matters now stand, almost every physician tries his hand at this, the most difficult of medical problems, and, as a consequence, few only become really skilled in the work.

But, while we believe that the proposed change is both desirable and feasible, we can readily foresee at least some of the difficulties in the way of its accomplishment. The majority, if not all, of the companies composing the chamber have pretty full lists of physicians whom they are now in the habit of employing as medical examiners. Some of these lists have been made out with great care and impartiality, and at no small pecuniary outlay; others have been made out with no special care, and have cost little or nothing. When the common list is finally made out, it will be found that it corresponds pretty closely with that upon which a great deal of money and time has been spent. This being the case, it is natural that the companies which have already spent their thousands in securing the services of the best physicians, should object to entering into any coöperative organization in which they are to stand upon the same footing, as regards expenses, with other companies which have spent little or nothing. This objection can be overcome, we believe, by assessing the companies at the very outset according to the following principle: suppose the Association's list for the State of Rhode Island to be completed. Out of the twenty or more companies composing the chamber, it will be found, for example, that five are doing business in that State, and that in a given town two of the five companies are already in the habit of employing the Association's examiner. If we estimate the average expense of obtaining an examiner's name at $5, the three companies which have not already employed the examiner in question should be assessed $1 each, and $1.50 should be placed to the credit of each of the other two companies.

The second great difficulty which the Chamber will have to overcome will be the framing of some working plan or machinery, through which the list of medical examiners can be kept full, can be quickly enlarged when necessary, and at the same time can be made easily available to all the members of the Chamber. This will be a difficult task, but we sincerely hope that the committee having this matter in charge will not be frightened by these difficulties into an entire abandonment of the plan. In the hope of stimulating others who are interested in the subject to express their views upon the proper method of organizing such a work, we shall give a hasty sketch of the plan which seems to us at least feasible, if not the best.

As a preliminary step, let the companies represented in the Chamber bring together their lists of medical examiners, compare notes, and determine upon a list which shall serve as at least the foundation for the roll of medical examiners to be employed by the Associated Life Insurance Companies. When the list is completed it will be necessary to entrust some one with the duty of managing it, as it will require constant revision. Each of the different States of the Union should next be organized into districts, with a medical supervisor or referee to be responsible for the appointments needed at any time within the limits of his district. These referees or supervisors should be men of high social and professional standing, men who will take a pride in conferring the patronage at their disposal upon those of their brethren who are best fitted to fill the positions.

The foundation list of examiners once completed, the States properly districted, and the district medical supervisors all appointed, and have we not at least an outline of an organization such as we believe the Chamber contemplates? But it is not difficult even to fill in some of the details. Thus, for example, the X. Y. Z. Company has at the outset been furnished by the Central Bureau with complete lists of examiners for the States of Ohio, Indiana, New Jersey, Pennsylvania, and New York. Its business does not yet extend beyond these States. After the lapse of three or four months, an agency is established in Connecticut; whereupon the Company writes at once to the Central Bureau for a list of medical examiners for that State, and receives by return mail the names and addresses of 100 or more physicians. The expense for this information ought not to exceed at the very most fifty to seventy-five cents per name. Then again, every week or every two weeks the Central Bureau should issue to the X. Y. Z. Company a notification of the changes (deaths, removals, new appointments, etc.) which have been made in the lists of the States in which the Company is doing business. Besides these weekly or semi-monthly reports to the different companies, the person in charge of the Central Bureau should make a monthly report to the executive or financial committee of the Chamber. But here we are encroaching upon territory which belongs more properly to the business man than to the physician. Enough, however, has been said to show that the plan of organizing a large body of medical experts—or at least men who in time may become experts—is neither Utopian in character nor involved in difficulties which a committee of physicians and business men might not readily overcome. Essentially the same plan has been tried with good results by at least three or four companies, but the expense connected with it has been so great as to frighten other companies from following the same course. The present co-operative movement, if carried into effect, would reduce the pro-rata expense to a comparatively low figure, while, on the other hand, it would very greatly increase the value of the examiners' services to the companies employing them, by impressing them with a greater sense of responsibility, by rendering the position more lucrative and hence more desirable, and, finally, by giving them more frequent opportunities for acquiring the experience necessary to make them experts.

MORTALITY OF NEW YORK.*

By PROF. CHARLES F. CHANDLER, Ph.D.

In studying sanitary questions, one of the first points is to get at the facts, and for this reason what are called vital statistics are carefully collected, collated, and studied in order to ascertain the facts connected with death and disease.

In 1872 the number of deaths in New York was over 32,000 in a population of 1,000,000, or, as it is technically spoken of, 32 per cent in the thousand. It is important to know how this death-rate is distributed among the ages, as it is the first point in determining how to prevent death, and we find to our horror that nearly one-half the deaths are of children less than five years old, showing that the causes leading to this great death-rate are dependent not so much on the action of persons themselves as of those who should care for them. Between the ages of five and twenty 12½ per cent. more die, so that before reaching manhood, 62 per cent. of our population dies. For the remaining period it is distributed more equally: from twenty to twenty-five, about 5 per cent.; from twenty-five to thirty, 5 per cent.;

* An extract from an address recently delivered in this city, and reported in full in the *N. Y. Tribune*.

from thirty to thirty-five, about 5 per cent.; from thirty-five to forty, a little over 4 per cent.; from forty to forty-five, a little less than 4 per cent.; from forty-five to fifty, 3 per cent.; from fifty to fifty-five, the percentage is 2½; from fifty-five to sixty, 2½; from 60 to 70 about 2, and from 70 to 75 a little over 1 per cent. Then the number falls off. In fact, all but 5 per cent. die before they reach the age of threescore and ten. While the mortality in New York is 32 in 1,000, we have reason to believe that under favorable circumstances the inevitable mortality should not be more than 17 in 1,000; that the mortality is nearly double what it might be if everything we could do were done to diminish it.

But it is not merely the persons who die who are to be mourned. They are not the most unfortunate people in the community. Those who are sick and cannot die are frequently much more to be pitied, and if we carefully study the ratio of sickness to death we shall find for every person who dies there are two persons sick all the time in every community. If 32,000 die in New York per annum, 64,000 are sick all the time; that is, sick for the entire year. But for the deaths from day to day it is estimated that for each death there are about 30 cases of sickness. In Manchester Dr. Playfair found it was 28 for each death, while the average duration of each sickness is about 20 days. A careful record was kept not long ago in the Metropolitan Police in regard to the amount of sickness. The Metropolitan policemen were selected by physical examination, and were as healthy a body of men as could be got together. They were governed also by tolerably strict and severe rules, by which their health was protected to a considerable degree.

It was found by a careful investigation over a period of four years, from 1864 to 1867 inclusive, that the total number of deaths in the force amounted to only 12½ in a thousand per annum; that is, it was only a little more than one-third as much as the average death-rate for the entire city. It was found, however, that the average sickness was 11½ days per annum. Every man in the force averaged a loss of 11½ days every year. Now taking the rate of 12½ deaths and multiply it by 30, the usual number of sicknesses, there must have been on an average 370 cases of sickness constantly, and multiplying this by 20, the number of days' average sickness, we have in this force of a little over 2,000 men a loss of 7,400 days by sickness. But we find that they actually lost 11,000 days by sickness, which would amount to 31½ years of labor. The value of the time actually lost by that little body of men by sickness was $37,000 a year.

The diseases commonly known as contagious do not cause so large a proportion of deaths as is generally supposed. For instance, in the year 1872 the city suffered from a very severe attack of small-pox, and a larger number of deaths ensued than are likely to occur again. There were nearly 1,000 deaths out of 32,000 by small-pox. Typhus and typhoid and scarlet fevers, measles and diphtheria destroyed 1,000 or 2,000 in the aggregate. Of course it is not claimed that anything like all the cases from sickness from special causes can be prevented, but a large proportion of the sickness, and a large proportion of the deaths, occur from bad or insufficient food, bad air, bad water, and imperfect shelter. Poverty is one of the most frequent causes of sickness, as sickness is one of the most frequent causes of poverty; but climate and topographical influences produce disease. There is one cause of disease, however, that cannot be too frequently mentioned, because it is entirely within our own control. In the year 1872 there were 314 deaths from alcoholic influences in this city, of which over 100 were from delirium tremens. No plan yet seems to have been successful in coping with this, which is one of the greatest evils of the present day.

A word in regard to the causes of disease again.

It has been demonstrated that disease is preventible, and the plague that formerly desolated large countries scarcely appears now. In the year 1592, in London, 21,000 persons died of the plague; in 1603, 36,000; in 1625, 45,000; in 1665 no less than 68,000 persons were swept away in a single year, twice as many persons as die in New York, and this was when London was a comparatively small city. In the little island of Iceland, in the year 1707, 18,000 people died of small-pox out of a population of 50,000. Now this is one of the most easily prevented of all diseases, and it is not probable that there will ever be another serious outbreak. In 1870, 900 persons died in New York, but in 1872 a vaccinating corps was sent out and 100,000 persons were vaccinated—as many as would permit it, being vaccinated free of charge. Yellow fever is equally under control. One of the best illustrations of the possibility of investigating a disease, and of controlling it, is presented by the case of the silkworm. The silkworm forms one of the most important elements of wealth in France. Some years ago a disease broke out among the silkworms, and the caterpillars which make the silk were covered with dark-colored spots; their ability to work suddenly stopped, and the silk industry of France was almost entirely destroyed. A great French chemist investigated the matter, but he at first found scarcely anything to detect in the little worms the character of the disease or its presence until it manifested itself by destroying the worm, but he subsequently discovered in the moths—the previous stage of development—the cause of the disease, or the indications of it, and he found that he could distinguish those moths afflicted with the disease, and that by proper isolation and treatment the disease could be eradicated and controlled, and so this important industry was saved to France.

Comprehensive inquiries have demonstrated the fact that thorough drainage of a place is invariably followed by a decrease in consumption, typhoid fever, and rheumatism. The researches of the English Sanitary Department and recent investigation undertaken by the State Board of Health of Massachusetts, have shown that the average result of drainage improvements, when thoroughly carried out, after a few years, is to reduce the mortality by consumption 15 per cent. and that the reduction continues. At the same time the other causes of mortality are diminished from one-tenth to one-half per cent.

In England a thorough system of drainage and introduction of good water was tried in a number of towns, and it was found that the improvement to the little town of Dover, of 23,000 inhabitants, resulted in 7 per cent. of the mortality being reduced. In Croydon the reduction was 22 per cent.; in Salisbury, 20 per cent.; in Cardiff, 32 per cent., and in Newport 32 per cent.; in other words, one-third of the deaths were prevented in this community by the introduction of a proper system of drainage and fresh water. While the general mortality was diminished in this degree, the mortality from special causes was diminished to a much greater degree.

Prof. Chandler gave from these facts the inevitable deduction that health is the workingman's capital. The emigrant is worth $1,000, and the able-bodied man worth several times more. He pointed out that the sanitary improvements in England increased the average length of lives in a geometrical ratio.

Original Lectures.

CLINICAL LECTURE

UPON CASES OF

UNUNITED FRACTURE, AND A CASE OF DEFORMITY PRODUCED BY MUSCULAR CONTRACTIONS.

By LEWIS A. SAYRE, M.D.,

PROFESSOR OF ORTHOPÆDIC SURGERY IN BELLEVUE HOSPITAL MEDICAL COLLEGE.

[Phonographically reported for THE MEDICAL RECORD.]

GENTLEMEN—The two cases which I shall first present to you to-day belong to a class of accidents of somewhat frequent occurrence, and it is proper that you should obtain some knowledge regarding their management. One of these patients has at present an ununited fracture of the femur, and the other has had the same condition of affairs, but union has taken place, as you shall presently see.

UNUNITED FRACTURES.

CASE I.—This case, when it first came under observation, presented all the features of an ununited fracture of the femur. It had been present some seven months, and in a man having good health and about the middle period of life. The only means resorted to in this case for the purpose of securing union of the bone was a most thorough manipulation, with the view of exciting inflammatory action at the point of fracture, and subsequently dressing it in a fixed apparatus, plaster-of-Paris. The case was treated by Prof. Wood, of this college, and fortunately the result obtained is all that could be desired. Firm union has been established, as you see, when a bending force is applied to the shaft of the bone. It will be noticed, as the patient is lying upon the table, that he is unable to raise the limb while it is held in the straight position. The reason for this is, the shortening which has attended the union of the bones has so approximated the origin and insertion of the muscles, that the requisite amount of muscular power has not yet been restored, to enable them, with their slack-rope, to raise the weight of the limb. The man, however, is now able to walk a very little; and the more the limb is exercised, the more rapidly will a complete recovery be effected.

CASE II.—The second case of this kind I bring before you, gentlemen, is in the person of this man, of middle age, who has heretofore always been healthy. Nearly six months ago he was thrown from a horse, and received a double fracture of the right femur. The lower fracture was at the junction of the middle and lower thirds, which has united; and the upper fracture was at the junction of the middle and upper thirds, which has remained ununited.

There is some shortening present when the limb is measured in the position it naturally assumes. Now, if the law laid down by some is true—namely, that shortening must necessarily take place before a fracture can unite, a certain amount of the shortening present in this case can be accounted for from the fact that the lower fracture has *united*.

The law, however, that shortening must necessarily attend the union of a fractured bone is incorrect, as can be satisfactorily proved by practical demonstration.

Before proceeding to the consideration of the case immediately before us, I will direct your attention to some of the rules which should govern you in the treatment of fractures.

The first rule is, that in the treatment of all fractures of bones, wherever they may occur, extension and counter-extension are to be applied in the proper direction until the muscles have adjusted the broken fragments with perfect accuracy, and after that *retention*.

Second. Extension should not be made beyond the point of securing accuracy of adjustment; for extension carried beyond that point is abnormal, and the tendency of the muscles is to rebel at once. Consequently, they manifest their excitation by reflex contractions, which are simply endeavors to get away from this over-extension. When extension has been carried sufficiently far to secure accuracy of adjustment between the fragments of broken bone, *and no more*, all the blood-vessels, nerves, fasciæ, and muscles are brought into precisely the same relation with each other as existed previous to the occurrence of the fracture. Circulation can now be carried on in a normal manner, and the chances for bony union to occur are very much increased.

Again, extension carried beyond the normal amount, and too long continued, produces either a constant irritable action of the muscles, or paralysis of the muscles; hence the practice of treating fractures by continuous and prolonged extension should be condemned.

If the muscles are retained too long in a fixed position there may be produced an absolute relaxation, consequently *lengthening* of the limb. It is altogether probable that this cause has been at work in the present case, and has given rise to non-union at the upper fracture; for, as you see, it now requires but a moderate amount of extension to bring the foot down to a point *below* the foot of the opposite limb, showing that the muscles, to a certain extent at least, have become paralyzed. Now you will see the impotence of the law laid down, that shortening must always take place if union is effected. There should be shortening instead of lengthening of the limb in the present case, for union has taken place at the lower fracture.

The muscles, doubtless, have become paralyzed in consequence of the long-continued extension which was maintained in the earlier treatment of the case.

These remarks are not made in any spirit of censure, but simply with a view of pointing out to you the liabilities in such cases, in order that you may avoid a like error.

Without further general remarks, we come to the question, What is to be done with this false joint?

The relaxation of the muscles is such, that the ends of the fragments can be separated nearly an inch. The false joint has existed so long, that in all probability the ends of the fragments have become tipped with cartilage.

The only means by which a union of the separated fragments can be effected is, in some way to excite a fresh attack of inflammation between and around their extremities. How is this to be done?

Sometimes you may succeed in establishing a sufficient amount of inflammatory action to cause union by merely rubbing the ends of the fragments together quite forcibly, as was done by Dr. Wood in the case just presented, and subsequently placing them in a fixed apparatus. Another method of exciting inflammatory action is by passing long needles down upon either side of the bone at the point of fracture, and sending a current of electricity over them. The current may be continued gently for five or ten minutes at each sitting, until sufficient inflammatory action has

been developed. This is a somewhat vigorous means for exciting inflammation, and in case too high a degree of new action is excited, it is to be combated with rest, cold, and the application of leeches. In general, however, if carefully applied, not much trouble follows; and in some instances, manipulation and electricity can be *combined* without producing any unpleasant effects. Another method which has been practised, is to cut down upon the bone, saw off the ends of the fragments, bring them together, and hold them in apposition by means of wire passed through holes drilled in the extremities of the fragments. This operation, in the present case, would be hazardous, on account of the close proximity of the fracture to important vessels in the thigh, and will therefore be deferred until the necessities in the case absolutely demand it. Another method consists in cutting down upon the bone, and boring several holes obliquely through the broken extremities, and removing the boring instrument in such a manner as to leave the chips within the holes. This may be sufficient to excite the requisite amount of inflammatory action.

Another method which has been recommended, is to cut down upon the bone, bore holes through the end of one fragment into the other, and afterwards hold them in apposition by means of ivory pins, trusting to those to excite an inflammatory action.

I do not approve of this latter method of operation; for it leaves foreign bodies within the bony structure which may subsequently do harm.

By whatever means it shall be accomplished, the principle is to excite inflammatory action in and about the ends of the bone, and when sufficient amount of inflammation has been developed, place the limb in a position of absolute rest, with the fragments of the bones in immediate apposition, and then maintain a certain amount of compression of the fragments against each other, rather than extension. It is not always practicable to avoid shortening in this class of cases, and the patients may very often have reason to be satisfied if union is effected at all.

In the present instance I shall first try what can be accomplished by manipulation. If this shall fail, then the galvanic current will be added. If, by thorough manipulation, I can succeed in sand-papering the ends of the bones, manipulation will probably accomplish the desired result.

(The patient was then placed upon the table, and the fracture subjected to the most thorough rotary and circumductory motions for the purpose of "grinding off the polish.")

This manipulation will be repeated once or twice a day until there is considerable evidence of the presence of inflammatory action.

Feb. 25th. Manipulation and galvanism have both been employed during the past week, and to-day the temperature of the limb is considerably elevated, the surface over the fracture is somewhat reddened, and a long plaster-of-Paris splint will be applied, reaching from the toes of the affected limb to above the ilium. The patient will now be placed upon the apparatus devised by Dr. Figueira, house-surgeon, for securing extension and counter-extension, and maintaining the lower portion of the body in a position somewhat elevated from the table while the fixed dressing of plaster-of-Paris is being applied.

You will please to notice the manner in which the leg is prepared for the application of extension. Dr. Figueira, after having applied a couple of rollers over the leg, applies upon each side a strip of wire gauze three-fourths of an inch wide or so, extending from the upper portion of the leg to some inches below the foot. The strips of wire gauze can be doubled together and fastened, and when the dressing has set for a few minutes, all the extension necessary can be applied without doing injury to the limb. This is a very valuable suggestion.

March 10th. The patient has been travelling around the wards every day since the application of the fixed apparatus.

CASE III.—*Muscular Contraction. Deformity simulating Hip-joint Disease.*—This patient, gentlemen, has been brought to us from an adjoining State, with the expectation that we will determine what the condition is from which she is suffering.

She is aged thirty years, and the mother of a family. Previous to one year ago she had enjoyed an average degree of health. Family history good.

One year ago she suffered from typhoid fever, and in the progress of the case bed-sores were developed over the sacrum.

After the second week of the disease she was inclined to lie with the thighs flexed upon the body, and the legs flexed upon the thighs. There was no diarrhœa during the progress of the case.

When convalescence was established, and the patient began to get up, she found that her limbs were excessively weak, but that the left was much weaker than the right. Contractions immediately began to follow, and have gradually increased until now, when we find the left leg very much in the position assumed in the third stage of hip-joint disease.

How are we to determine whether it is hip-joint disease or not? While the patient is lying upon her right side you will notice that the left knee is about four inches above the other; that is, the limb is *apparently* shortened to that extent. The left limb is also strongly adducted, and the thigh is carried across the thigh of the right side.

The next thing to be determined is, whether the shortening which is present is apparent or real.

If it is due to distortion of the pelvis, when the pelvis is placed in proper relation with the trunk it will at once be removed. In order to place the trunk and pelvis in normal relation, place the patient upon the back. Then two lines, one drawn from the ensiform cartilage to the centre of the symphysis pubis, and the other from the anterior superior spinous of one ilium to the other, will cross each other at right angles. This will be the case if the pelvis is placed in this position, and held firmly fixed, with the spinous processes touching the table, and, if the shortening is apparent, it will at once be removed. In this instance, as you see, the shortening is at once removed, and is, therefore, only apparent. Crowding against the lower extremity of the femur produces no pain whatsoever, which would not be the case if disease of the hip-joint were present. Pressure upon the trochanters causes no pain. Abduction causes pain. Extension causes severe pain. The slightest flexion of the thigh relieves all pain at once.

If this were a case of hip-joint disease it would be necessary to slightly flex, and at the same time slightly extend the thigh in order to place it in the proper position to give relief from pain.

As it is, simply lifting the limb, giving it slight flexion, which approximates the origin and insertion of the psoas magnus and internal iliacus muscles, causes these muscles instantly to go to sleep, and all pain is at once relieved. Still further, if we would satisfy ourselves beyond question, which is well to do when possible, we should employ Nelaton's test. If a line is drawn from the tuberosity of the ischium to the anterior superior spinous process of the ilium upon the

same side, it will pass directly over the trochanter major, when the bones of the thigh and pelvis are in their normal relation.

If the head and neck of the femur are absents, as is the case in advanced hip-joint disease, the trochanter would be above this line.

If there is fracture of the neck, causing displacement, the trochanter would be above the line indicated. Now, applying this test in the present case, it is found that the line passes *directly* over the trochanter. It is evident, therefore, that the head and neck of the bone are in proper relation with each other and with the acetabulum. This deformity, therefore, is due to some condition of the muscular attachments rather than to some disease affecting the bony structure. Our conclusion then is, that the adductor and flexor muscles of the thigh have been inflamed from some cause, which has resulted in the firm contraction now present. We arrive at this conclusion from the following facts: that no evidence of hip-joint disease or other disease of the bony structures is present; that the moment these two sets of muscles are placed upon the slightest stretch, pain is at once developed. Also, the additional, and not less important fact, that the moment the limb is placed in a position which relieves all tension and permits these two sets of muscles to go to sleep, all pain at once ceases.

The question now arises, What is to be done for our patient?

Constant, unremitting extension by means of elastic force will restore the parallelism of the limbs; passive movements will restore *active* movements at the joints, and the joint action of the two, carefully applied and gradually increased, will establish a perfect cure.

This belongs to the class of cases that receive great benefit from the so-called *massage*, the *means* being orthodox, while the *name* is a humbug. Every physician and surgeon from time immemorial has employed this manual manipulation, but it has now come out under a new guise, simply to give the impression that something new has been devised and developed in a new and mysterious manner.

This is removal of the deformity by means of gradual extension.

There is another method of removing the deformity and overcoming the muscular rigidity, and that is to place the patient under the influence of an anæsthetic, and give rapid and forcible movements to all those joints which have been rendered useless for so many months by muscular contraction and perfect rest. When free motion has been established in that manner, the patient is to be placed in bed, adhesive plaster applied to the limb in the manner used for extension and counter-extension, and just sufficient extension employed to maintain the limbs in their proper position. Then guard against the inflammatory action which may follow the rapid and forcible movements which have been applied for breaking up all resistance to free motion, by the firm application of a roller bandage, perfect rest, and, if necessary, the application of cold to the parts involved, as already alluded to in connection with a former case. But the question may arise, Will it not be necessary to cut some of these contracted tissues before complete cure can be effected?

If, while the patient is under the influence of an anæsthetic, we place these contracted tissues firmly upon the stretch and retain the tension, and then make an additional point of pressure with the thumb or finger upon the tissues thus made tense, and reflex contractions *are* excited, the contracted tissue must be cut or forcibly ruptured, whether it be muscle-tendon or fascia, before any benefit will follow treatment.

If, on the contrary, reflex contractions are *not* excited by the additional point of pressure made in the manner indicated, the application of constant elastic force, gradually increased, will cause the contracted tissues to yield sufficiently to give complete recovery without resorting to the cutting or rupturing operation.

If, upon the one hand, these contracted tissues are kept in a constant state of tension by an extending force, without cutting or rupture when the additional point of pressure produces reflex contractions, an irritable fever will most likely be developed, which will sooner or later wear the patient out if the extension is continued.

If, on the other hand, the case is left to itself, structural changes will inevitably be developed in the muscles, leaving the deformity beyond all hope of correction.

This is therefore a case, gentlemen, in which a vast amount of damage may be done by injudicious interference; one in which certain inevitable results are to obtain, if left alone; and one in which much good can be accomplished by the proper application of elastic force.

With proper management, we may reasonably expect that this woman will be able to walk within one year.

Original Communications.

AN AGGRAVATED CASE OF TRIFACIAL NEURALGIA

SUCCESSFULLY TREATED BY THE DEEP INJECTION OF CHLOROFORM.

By J. B. MATTISON, M.D.,
CHESTER, N. J.

To Prof. Roberts Bartholow, of Cincinnati, is the profession in this country, and the world, for aught we know to the contrary, indebted for the discovery of the astonishing result produced by the deep injection of chloroform in those cases of the most agonizing neurotic distress known to suffering humanity—tic douloureux, or, as Trousseau styles it, "tic epileptiforme."

The peculiar obstinacy and almost hopeless prospect of effecting a radical cure in typical cases of this disease is well known to the profession—medical and chirurgical interference having been resorted to in vain—and any discovery which seems to add another weapon to our armamentarium in the struggle with this well-nigh invincible disorder must be hailed with delight, especially by those unfortunate enough to be numbered among its tortured victims. Such an addition we believe the deep injection of chloroform to be; a belief based on the wonderful results of cases by Dr. Bartholow, and a well-marked case very recently under our observation.

In a communication on this subject lately given to the profession,* Prof. B. explains the *modus operandi* of its action and the details of the operation so thoroughly that it remains for us merely to confirm his statements by citing the circumstances and termination of the case we have to present.

C. D., whose history as an excessive consumer of morphia, hypodermically, was given to the fraternity some months ago,† applied to us, Dec. 18th, for the

* Med. and Surg. Reporter, No. 871.
† Ibid., No. 831.

relief of an aggravated attack of trifacial neuralgia from which he had been suffering for several days. By referring to the history aforesaid it will be noted that the first manifestation of his neurotic trouble was in this particular locality, where it continued for two years, and then suddenly attacked his left hip, remaining there most of the time for twelve years, till its return to the right infra-orbital branch of the fifth pair.

The onset of its recurrence in the original site was sudden, and without any discoverable determining cause. The paroxysms followed each other at intervals of four to six hours at the beginning of his attack, which gradually diminished until, at the time of his visit, they were occurring every few minutes. During the seizure the muscles of the affected side twitched convulsively, the face was distorted, and the patient, laying hold of anything within reach, groaned aloud in the agony of his distress. Such excruciating suffering we never witnessed.

He had been using his morphia freely, but so intense was the pain it produced no effect. During the four days subsequent to his visit we employed various remedies with the hope of affording him relief, but without any satisfactory result. Morphia, subcutaneously, in increased amount, reaching at one time five grains at a dose, without any benefit whatever; atropia, hypodermically; potass. brom. in large doses; hyoscyamus, sinap., blist. to the nucha, and, lastly, galvanism, which seemed at first to cut short the paroxysms, but did not lessen the frequency of their coming. Finally this failed, and the man became desperate, threatening to destroy himself if relief were not obtained.

At this juncture, when the paroxysms were becoming frightfully frequent, with no abatement in their severity, we resorted to the deep injection of chloroform. Charging the syringe with one-third of a drachm, Nichols' manufacture, the needle was inserted under the upper lip, pushed upward until its point rested near the infra-orbital foramen, and the chloroform slowly injected. Its presence instantly gave rise to a paroxysm of unprecedented severity, which continued about four minutes, followed by a feeling of anæsthesia of the parts in which the chloroform was introduced, decided drowsiness, and *entire subsidence* of pain. No giddiness was produced, and the gait was unaffected. A distinct, puffy swelling soon made its appearance at the site of the injection, which did not entirely disappear for several days, but no inflammation was excited, consequently no abscess ensued.

The relief from suffering continued complete for one hour and fifty-five minutes, the sopor, meanwhile, being very decided, and the patient acting much as if under the influence of moderate general anæsthesia. At the expiration of this time he had a slight seizure; one half hour later another, very mild, and thirty minutes after, on opening a door to get into the outer air, he experienced one of considerable severity. The drowsiness continuing, he was directed to bed, and on visiting him two hours subsequently, we learned he had passed through two paroxysms, one slight, the other somewhat severe. The numbness of the lip and cheek was marked, and the drowsiness continued. This was at five P.M. of the 22d, from which date until the afternoon of the 27th he remained entirely exempt from pain. Calling again that evening (22d) and finding him still sleepy, he was ordered chlor. hyd. grs. xx. every half hour until decided effect should be produced. Two doses were taken, when he fell asleep and slept for five hours. Forty grains additional were then administered, same dose and interval as before, when he again fell into a profound slumber, which continued for ten hours. On awaking he arose, made his toilet, an operation he had been utterly unable to accomplish for days previous, on account of the horrible pain it excited, and walked to our office, a considerable distance, without difficulty. He was still very drowsy, and we again recommended him to bed; sleep being secured the following evening by the free use of chloral. The next day he complained of chilliness, great debility, and a sense of general discomfort. He was now placed upon the use of the following tonic:

℞. Magnes. sulph..... ℥ ss.
Mangan. " ..... ʒ ij.
Fer. " ..... ɔij.
Quin. " ..... ɔi.
Acid dil..... ℥ ss.
Aq. ad..... ℥ viij.
M.

S. Tablespoonful in wine-glass of water thrice daily, and in addition, strych. sulph. gr. $\frac{1}{16}$ hypoderm. ter die, with atrop. sulph. gr. $\frac{1}{60}$, subcutan. hor. somn. Chloral was employed to secure sleep at night, and a generous diet ordered, beef-tea and coffee being freely given.

Finding, after a few doses, the above tonic ineligible on account of its bulk, we substituted

℞. Elix. phos. fer. quin. et strych. (Wyeth's.)

Dessertspoonful three times daily, continuing the strych. and atroph. hypodermically as before.

The patient kept his bed most of the time until the afternoon of the 27th, when, in washing his face, he experienced a paroxysm of the trifacial pain, of decided severity, which continued three minutes, but without any of the spasmodic muscular movements attending the previous attack. Two hours later he had another seizure, of diminished severity, since when, until the date of this communication, a period of nearly four weeks, he has been entirely free from suffering.

The second tonic was continued one week, when he was prescribed the following:

℞. Quin. sulph.....gr. ij.
Tinct. fer. chlor.....gtt. xxx.
Liq. potass. arsen.....gtt. x.
M.

S. Take at a dose, diluted, after each meal, the other remedies to be continued.

Under this treatment his appetite returned, strength increased, and his general condition so improved that at the expiration of seventeen days he was able to resume his vocation.

The plan of treatment pursued subsequent to the injection of the chloroform demands, perhaps, some explanation. It had a threefold object in view: recuperation after the prolonged bout of pain; toning up his nervous system to eradicate the tendency to neurotic disorder; and the making amends for the withdrawal of his long-accustomed stimulus.

As to the first point, the result of the case sufficiently proves its success.

Concerning the second, a marked decrease in his sciatic suffering (for, a few days after the relief of his trifacial trouble, pain returned with great severity in his left hip) made itself manifest in less than a fortnight.

Regarding the last point, we may state that, taking advantage of a peculiar combination of favorable circumstances (of which more may be said hereafter), we withdrew *entirely* his morphia, with the object of

emancipating him from the drug which for more than six years had enslaved him.

The effect of this particular movement is still in abeyance, a sufficient time not having elapsed to enable us to speak *positively* as to a *radical* result.

This much, however, *can* be said: *not one particle of morphia* has entered his system since the chloroform injection (at this date, more than four weeks); his desire for it is a thing of the past, the craving subsiding *entirely* at the expiration of *three* weeks; so that we have strong reasons for hoping we shall be able to report at no very distant day an accomplishment complete and satisfactory.

In a retrospect of this case, one or two additional points present themselves for reflection. The first relates to the amount of chloroform injected. We entertain the opinion that had the quantity been larger the subsequent diminished paroxysms would not have been experienced. Should a similar case present itself, *one-half* a drachm would be the *minimum* injection.

The *intense* pain produced by the diffusion of the chloroform suggests the propriety of a previous resort to very moderate *general* anæsthesia, with a view of avoiding this exceedingly painful complication.

To sum all, the astounding results in every case, to our knowledge, recorded, mark the injection of chloroform as a new era in therapeutical advancement, entitling its discoverer to the lasting gratitude of a class of patients to whom, heretofore, in many cases, no measure of relief has proved competent to cope successfully with their painful disorder.

I may add, the man has had no return of his "tic;" his reformation as to the opium habit seems *complete*, not having had an atom of morphine since the chloroform injection. He has, too, been *entirely exempt for weeks* (something unprecedented during *fifteen years'* experience) from his sciatic trouble, making, in all, a very interesting case, with an eminently satisfactory result.

ACUTE INSANITY.

By HORATIO R. BIGELOW, M.D.,

HARTFORD, CT.

In the paper read at the Forty-first Annual Meeting of the British Medical Association, Dr. Sankey expressed a doubt of the existence of any such disease as primary acute mania, because the cases which had come under his notice as instances of this condition were—

1. Cases of general paresis in the expansive stage.
2. Secondary attacks of recurrent insanity.*

That these cases of primary disease are extremely rare, that in the literature of insanity other forms of cerebral aberration are very frequently confounded with it, is very true; but that acute mania *never* obtains primarily, is an assertion which would find but little corroborative evidence in its support from the records of our various insane asylums.

In the vast majority of instances the "délire aigue" is a mere symptom of an antecedent condition, which had manifested itself in such wise as to be inappreciable by friends; or the symptoms may have been regarded as eccentricities of character; or the unwonted melancholy, misanthropy, or undue exaltation, as the normal deviations from a healthy standard. It is from meagre, insufficient histories, from a lack of thorough investigation, and from a want of discriminating diagnosis, that cases of acute melancholia, mania with exaltation, recurrent mania, and some stages of paresis, are confounded with each other and with acute mania.

An intellectual differentiation of symptoms, the balancing of statistical facts, the deductions drawn from a searching history of the patient's life, surroundings, and relations, with a scientific employment of physical means, will usually insure a correct and reliable diagnosis.

Acute mania is most frequently confounded with the violent stage of acute melancholia; hence we would draw the attention of the profession to the salient points of difference between the two.

Acute Mania.—This condition has no period of incubation, and may be accompanied with absolutely no history of previous departure from a normal condition of health, with no unusual manifestations of thought or action, and without any trace of hereditary taint. It seizes its patient suddenly, while engrossed in the vocations of his daily life, never while asleep. It affects men oftener than women, the percentage out of twenty cases observed being sixty-five in favor of the male sex. The most susceptible age in the female is between twenty and twenty-five years—in the male between twenty-five and thirty years. Its tendency is towards death from exhaustion, the percentage of fatal terminations being greater than in acute melancholia. There is great incoherence, restlessness, violence, and seeming unconsciousness to surrounding circumstances. There is a copious secretion of viscid saliva; constipation generally present. This stage of activity continues two or three weeks, to be followed by a condition of extreme prostration. There is no undue, persistent tension of a dominant idea, giving rise to a positive unaltering delusion as in melancholia, but a marked incoherence of expression, with no intelligible or logical continuity of expression. The exciting cause of the disease seems to destroy the harmonious transference of residua in the higher centres of the brain, the mind being unable, from instability of nervous action, to keep before itself the contemplation of any simple fact. The hallucinations and delusions are fleeting and unstable. There is less perversion of the muscular sense than in melancholia, and the manifestations of this disorder of the motor centres are not so persistent and coherent. The attack is progressive in character.

As will be seen from the table, the ophthalmoscope reveals most frequently a condition of hyperæmia. Out of the twenty cases, fifteen presented this congestive aspect of the fundus oculi. Of these the majority were in a state of intense hyperæmia, obscuring the regular, sharply defined periphery of the papilla, and destroying its pinkish hue. Palpation sometimes distinguishes an over-distention of the eye—hemiopia; megascopia may be present; normal acuity of vision lessened.

The breath has an unpleasant fetor. The skin is dry, hot, and parched. The urine is lessened in quantity, containing an undue amount of phosphates. Fæces dark and of very offensive odor.

In the stage of exhaustion, death often sets in very suddenly and unexpectedly. Finally, the post-mortem changes are generally of a characteristic nature. The ventricles usually contain a liquid resembling chalk and water; the arachnoid and cortical cells of the brain are "filmed" with a cloudy substance. The substance of the brain is congested, and when cut into shows numerous red punctated spots.

Males, 13; Females, 7; Average age, $28\frac{3}{5}$ years.

Average age, Females, $19\frac{3}{7}$ years. Average age, Males, $33\frac{7}{13}$ years.

Anæmia, 25 per cent.; Hyperæmia, 75 per cent.

* British Medical Journal, Oct. 11, 1873.

ACUTE MANIA.

Case.	Age.	Sex.	Attack.	Hyperæmia.	Anæmia.	Optic neuritis.	Dilatation of Veins.	Atrophy.	Excavation of Papilla.	Ischæmia Retinæ.	Termination.
1,2	27. 38	M.	First	*1, 1			1, 1				Recovery
3	30	M.	First	1		Double					Tumor † Death
4	56	M.	First	1							Recovery
5	29	F.	First		1		1		1		Recovery
6	26	M.	First	1		Single	1				Recovery
7	18	M.	First	1			1				Recovery
8	17	F.	First		1						Recovery
9	48	M.	Second		1						Recovery
10	25	M.	First	1			1				Recovery
11	24	M.	First	1		Single					Recovery
12	19	F.	First *	1				1			Recovery
13	17	F.	First		1						Recovery
14	24	F.	First	1			1	‡	1		Death
15	19	M.	First	1	†						Death
16	28	M.	First	1			1			1	Death
17	47	M.	First	1			1				Recovery
18	50	M.	First	1			1				Recovery
19	17	F.	First		1				(*) 1		Death
20	16	F.	First	1			1				Recovery
Total				15	5	3	11	1	2	1	

Deaths, 5; Recovery, 13; Unknown, 2. In cases Nos. 3, 12, and 14, the Mania was not primary. In four other cases it is doubtful if the disease was primary, though the records called them cases of Acute Mania.

Acute Melancholia.—The period of incubation is characterized by some changes in the patient's manner of reaction to surrounding circumstances. He may shun the society of his friends and family, become addicted to morbid introspection, and seek seclusion to gratify the desire. The hopeful part of his being becomes nil, and he views the occurrences of life in the most melancholy way; or sudden fears of his spiritual condition may possess him to the extent of overbalancing reason, and his melancholy assume a religio-maniacal type; or the concentrated application of his faculties in business speculations may have induced unwarrantable fears of approaching poverty; or the sudden accumulation of wealth may exalt cerebral action to a dangerous degree. Even in the minutest, most commonplace events of an every-day life, we may recognize slight abnormalities, which should excite our most serious apprehension. Generally close investigation will reveal some neurotic family taint, some eccentricity of conduct on the part of immediate relatives. It occurs most frequently in females. Out of twelve cases tabulated, seven were females, five were males. The average age of women suffering from this form of insanity was 24 years; of men, 39 years. The percentage of recoveries is greater than in acute mania. There is the same restlessness and violence as heretofore mentioned, but a greater suicidal tendency. There is a great, persistent tension of a single idea, usually of a religious or personal nature. The patient will imagine himself guilty of the unpardonable sin, or of some civil crime, or he will call aloud for reconciliation with an offended wife or child. The delusion is of the same unchangeable stamp. The sudden transition of ideas without logical coherence; the constantly changing hallucinations and illusions so characteristic of acute mania, are absent in acute melancholia. The patient may be entirely conscious of his surroundings, of his actions, and of his illness, yet will he not be convinced of the delusive nature of his fears, which are to him terribly true and real facts. The face in the stage of excitement is of exalted cast; the eyes wild and unsteady. The "muscular sense" is greatly perverted. An idea, which in some instances may have reference to a previous condition, takes possession of the mind, to tyrannize over the cerebral outcome, and owing to the independent power of reaction, of the ideational centres to expend itself outwardly without the interference of volition, or the violent action may be the honest manifestation of what the patient thoroughly believes to be the real aggravation of circumstances by which he is surrounded. In the stage of exhaustion, the face changes to a depressed, woebegone expression. The vital powers are at a low ebb. The patient is oppressed by the horrible condition in which he believes himself to be placed. He receives food very reluctantly.

The ophthalmoscope in the majority of instances will disclose marked anæmia. In the twelve cases observed, eight presented appearances of anæmia and four of hyperæmia. As instances of both conditions occur, we should be guided to a correct diagnosis by a consideration of the history of the case, by a knowledge of the prodromatic period, and by the measure of ideational derangement.

* Chronic meningitis of long-standing found at post-mortem.
† Thrombosis. ‡ Glioma.

ACUTE MELANCHOLIA.

Case.	Age.	Sex.	Attack.	Hyperæmia.	Anæmia.	Optic neuritis.	Dilatation of Veins.	Atrophy.	Excavation of Papilla.	Thrombosis.	Venous Pulse	Termination.
1	17	F.	First		1						1	Recovery
2	21	F.	First		1				Slight			Recovery
3	18	F.	First		1	Single						Recovery
4	28	M.	First	1			1			1		Unknown
5	40	M.	First		1							Unknown
6	50	M.	First	1			1					Recovery
7	50	M.	First		1							Recovery
8	27	F.	First		1							Recovery
9	32	F.	First		1		*	1				Recovery
10	28	M.	First		1							Unknown
11	26	F.	First	1†								Dementia
12	28	F.	First	1				1				Dementia
Total				4	8	1	2	2	1	1	1	

Males, 5; Females, 7; average age 30½ years. Average age, Males, 39½ years. Average age, Females, 24¼ years. Anæmia, 66⅔ per cent. Hyperæmia, 33⅓ per cent; Deaths, 0; Recovery, 7; Unknown, 3; Dementia, 2.

As a typical case of acute melancholia, I would cite the following, now under observation:

R. McK., twenty-four years old, a Roman Catholic, born in Ireland, single, bricklayer by trade, having amassed by his own efforts a fortune of eight thousand dollars; maternal uncle was insane, patient is of temperate habits, with no prejudicial vices. Has always been rather reticent and nervous, with a prevailing passion for making money. Six or seven years ago he was affected by heat-stroke, since which time he has been a "little peculiar." About a week before coming under special treatment these peculiarities became more aggravated. He refused food and medicine, evincing suicidal propensities. His delirium was so severe that he was obliged to be held in bed. The disease has periods of remission. The ophthalmoscopic signs are those of intense hyperæmia. There is a copious secretion of tenacious saliva; skin hot and dry; secretions retained. The frenzy is of a religious type, the patient constantly calling upon God, and mistaking his attendants for Jehovah, Judas, etc. His violence is extreme, but little, if any, perversion of the muscular sense. Convinced of the truth of his delusion, he will reason quite rationally thereon.

* Œdema of papilla.
† Crossed hyperæmia: capillary injection of papilla.

There is no general incoherency of ideas, but a prominent fixed delirium.

The disease is now passing into the stage of exhaustion. The diagnosis in this case was based upon the history of the prodromata, and upon the character of the ideational derangement. The violence and delirium were quite as great as in acute mania.

Mania with exaltation can rarely be confounded with acute insanity by a discriminating observer. In these cases there is always an exciting cause and an unstable family history. There is great egoistic, self-important exaltation, a pompous gait and manner, and a large sense of personal importance.

If there were any doubt in the differential diagnosis of acute mania and general paralysis, the sphygmograph would decide the case. The tracings in these instances are peculiar: the upward line is short and abrupt, the descending line is long, wavy, and without an aortic notch.*

SEPARATION OF THE UPPER EPIPHYSIS OF THE HUMERUS.

By PROF. FRANK H. HAMILTON, M.D.,

NEW YORK.

Case I.—Samuel Robuck, æt. 13, fell through a hatchway, July 9, 1868, striking on his shoulder. He saw a regular physician within five hours after the injury was received, who said that the arm was dislocated; and on the following day, under the influence of chloroform, he tried to reduce it. The doctor thought he had succeeded, and he then applied bandages to keep it in place. At the end of two weeks the doctor declined, for reasons which are not known, to have any further care of the case, and the patient consulted Dr. Voss, at the Dispensary. Dr. Voss detected the nature of the case and sent him to me to confirm his diagnosis. I found the upper end of the lower fragment projecting in front, and not united. The arm was shortened half an inch. I have not seen the patient since, and do not know the result.

Case II.—Joseph Snellbach, æt. 16, fell backwards down a flight of steps, striking upon his back and arm near the shoulder, May 10, 1868, causing a separation of the upper epiphysis of the left humerus. Dr. —— of this city, now deceased, saw the patient within half an hour, and supposing that he had suffered a dislocation of the head of the humerus, he attempted to effect reduction with his heel in the axilla, and without anæsthetics. On the following day I found him in ward 16 at Bellevue. The house-surgeons were divided in opinion as to its character, some at first believing it to be a dislocation; others, with myself, recognized it to be an epipheral separation.

All efforts at replacement proving ineffectual, splints were applied by my direction, and on the 15th of July the patient left the hospital with the fragments united, but overlapped at the point of fracture, the upper end of the lower fragment being in front of the upper fragment. The limb was shortened one inch, but its motions were free, and there was no reason to suppose that its utility was in any degree impaired.

Case III.—C. H., æt. 19, living in a neighboring town, in the delirium caused by fever, fell from a third-story window, May 12, 1868. Two very intelligent and experienced physicians who were called, thought the boy had received a fracture of the acromion process, accompanied with a dislocation of the head of the humerus, and they attempted to reduce it, but without success.

On the 2d of June following, three weeks after the receipt of the injury, I saw the patient in consultation with his physicians, and found a separation of the upper epiphysis of the humerus. The upper end of the lower fragment projected in front of the acromion process, appearing a little above the level of the process, and covered only by the skin. No union had occurred between the two fragments.

Case IV.—John Davis, æt. 18, fell about 8 feet, Sept. 2, 1873. Of the three surgeons first called, Drs. H. and S. thought the boy had received a fracture; the third believed it to be a dislocation, and having placed the patient under the influence of ether, attempts were made to reduce it. The deformity not being relieved, I was added to the consultation. I found the shoulder a good deal swollen. The upper end of the lower fragment could be felt distinctly in front of the acromion process. At first, the surgeons informed me the broken end seemed just under the skin and almost ready to be thrust through, but the extension had made it retire somewhat. The end felt rough and serrated. While making extension I was able to detect a slight crepitus, or click. Employing Dugas' test, I found the elbow would rest upon the front of the chest. In short, the diagnosis was complete, and Dr. S., having taken charge of the case, applied one long splint, and a sling under the wrist, but not under the elbow. The fragments have united with very little deformity.

(This case was subsequently seen by Dr. Moore at one of my Bellevue clinics.)

CONTUSION OF THE LARYNX AND TRACHEA,

FOLLOWED BY IMMEDIATE AND COMPLETE LOSS OF VOICE, DYSPHAGIA AND DISTRESSING DYSPNŒA, PARALYSIS OF THE LEFT VOCAL CORD: SLIGHT AMELIORATION.

(Read at a stated meeting of the New York Laryngological Society.)*

By BEVERLEY ROBINSON, M.D. (Paris),

SURGEON TO THE MANHATTAN EYE AND EAR HOSPITAL (DEPARTMENT OF THE THROAT), PHYSICIAN TO THE DEMILT DISPENSARY, ETC.

John Haley, mason, aged 60, came under my observation October 25th, 1873. Until October 5th had enjoyed excellent health. On that night patient says his son, a youth 17 years of age, returned home at a late hour in an intoxicated state, and when remonstrated with for his conduct struck him (patient) violently with his fist on the right side of the neck.

Immediately on receiving the blow, patient lost the power of articulate speech, and this condition continued during 4 hours; though he could make a faint, but indistinct and unintelligible noise, he was unable to pronounce a word so as to make himself understood. During this period he expectorated at intervals, and after painful paroxysms of cough, a moderate quantity of sanguineous sputa. The time mentioned having elapsed, his voice returned to him partially, manifesting itself in a low, hoarse whisper, and there were no more blood-tinged sputa.

During two days he could not swallow at all, and in attempts to perform deglutition violent attacks of

* Vol. i. West Riding Reports, 1871.

* The patient was seen by the members of the Society who were present at the meeting, and the accuracy of the diagnosis confirmed.

choking were caused, and the aliments introduced by the mouth were rejected—in part through the mouth, in part through the nasal passages.

At the expiration of that time, patient could swallow liquids,—with difficulty, however, and only while he held his nose tightly compressed between his index-finger and thumb.

Deglutition, to be accomplished, had to be performed rapidly, otherwise all fluids returned through the nose and mouth, and did not reach the stomach at all. When 10 days had passed by, patient began to swallow very soft, semi-solid substances, such as corn-starch or ground crackers, mixed with an abundant proportion of milk.

After this stage was reached no compression of the nose was found necessary, and he gradually became able to swallow articles of diet such as hashed meat, mashed potatoes, etc., until at present he can take any food which he could have taken previous to the contusion.

Great dyspnœa existed for several days after the contusion, especially at night, when his breathing was noisy.

Actually, his respiration is much improved, although occasionally and after unusual exertion in walking, or talking, some difficulty of breathing is still appreciable.

The day following the assault the patient went for advice to the Northern Dispensary. He was under the care of one of the visiting surgeons to that institution nearly three weeks, and finally consulted me for the first time October 25th.

There was then moderate pain localized over the laryngeal region, evident difficulty of breathing, and, according to testimony of patient, notable dysphagia. I prescribed an inhalation of compound tincture of benzoin (℥ i., aquæ ℥ o); to be repeated three or four times in 24 hours.

October 28.—Stridulous breathing, as in œdema glottidis, on inspiration; expiratory movement easy; voice very hoarse; aphonia more marked out of doors, where voice is reduced to faintest whisper. In-doors, patient can sound his voice with some strength. This symptom has not varied since last seen; breathing somewhat improved.

On palpation, no signs are found of fracture or displacement of hyoid bone, or cartilages of larynx; no cough; sleeps well; expectoration in the morning on rising of pellets of thick mucus; auscultation of chest detects only a few disseminated, moist râles.

Larynx.—Physical examination shows that the left vocal cord is completely fixed; right vocal cord approximates well, in fact goes beyond mesial line. Both vocal cords are slightly congested; ventricular bands are considerably swollen and the upper orifice of larynx narrowed; no deviation of epiglottis or arytenoid cartilages from their normal position.

Treatment.—Rept. inh. benzoini —troch. ipecac.

Nov. 11.—No improvement in voice; feels very well in every other respect; still a few humid râles in chest, but no diminution of healthy tonality on percussion of chest-walls; vocal cords less congested.

Treatment.—Mist. quiniæ (gr. ij.–℥ i.) and mist. expectorans (ipecac, acacia), etc.

December 7.—Voice is more distinct and stronger but continues nevertheless in a measure husky and disagreeable; some local pain remains and is made evident by very slight pressure over sternal notch on trachea. When in the open air the effort necessary to make himself heard and understood in speaking is very great, and the exertion quickly fatigues him, so much in fact that the distinct enunciation of a series of words is impossible; coughs a little in the morning; though he has had for years bad hearing, *deafness* appears to have *augmented* since the blow.

Larynx.—Examination with small mirror shows an orifice *now* tolerably patulous; vocal cords very slightly congested; no swelling of consequence in any part of the organ; left vocal cord approximates, though in a very slight degree, towards the middle line in the effort of phonation.

Treatment.—Faradization of cords: strychniæ sulphatis gr. 1-30 ter in die sumend.

Remarks.—There are few facts more familiar to the general surgeon than localized loss of function, in cases of contusion, compression, or laceration of nerves. Such loss manifests itself often in the upper or lower limbs, and less frequently in some portion of the head or trunk. A lesion, similar to the one of which we have just given the history, is very rarely reported, we do not say encountered, because such cases must, it seems to us, oftentimes occur, and when the force of the blow is sufficient, we should presume that loss of function, temporary or permanent, would be almost of necessity the consequence. After considerable research in the works of authors who are recognized authorities on injuries of this nature, and in the periodical medical literature of the day, we have been able to lay our hands on but one analogous case. The history of it may be found in some very interesting lectures on the Principles of Surgical Diagnosis by Le Gros Clark, published in London, 1870, pp. 228, 229; but in this case, though "complete aphonia" is mentioned as being a prominent symptom, no laryngoscopic examination was made, nor was the internal condition of the vocal organ *even conjectured.* We have found, it is true, a citation of one other "illustrative history of a blow on the neck" in Dr. Weir Mitchell's recent and admirable work on Injuries of Nerves and their Consequences.

Reference is there made (p. 96) to the Sanitary Commission Medical Reports for 1867. On consulting this memoir (p. 418), we have not found aphonia, dysphagia, or dyspnœa noted among the symptoms which followed the blow. There was local swelling over the contused region, and, Dr. Mitchell adds, "also a good deal of pain in the right arm for a few minutes, owing, as I supposed, to violence done to the brachial plexus.....slight pain was felt in the forearm and hand at intervals until the twelfth week." Now in the case which we report, no pain in the arm, forearm, or hand has thus far been felt, and there is therefore no reason to believe that the brachial plexus was contused or otherwise injured by the blow.

In a general way, and with our actual knowledge of the physiological functions of cranial nerves, and having regard to the symptoms above noted, we might fairly infer that the spinal accessory, glosso-pharyngeal, and more apparently perhaps the vagi, which send sensor and motor branches to the intrinsic muscles and mucous covering of the larynx, had been disturbed in their governing power.

But how would it have been practicable without the intelligent use of the laryngoscope to see, recognize, and therefore be able to affirm positively that the left vocal cord is the seat of the trouble which causes loss of voice,—when there is organic lesion of the left recurrent nerve, or loss of its healthy power of innervation.

Accuracy of diagnosis is in this instance of essential importance, for without it the treatment would evidently be uncertain—perhaps injudicious or injurious. A circumstance in our case needs explanation: it may be asked in what manner a blow on the right side of

the neck can produce paralysis of the left vocal cord.

Our anatomical knowledge furnishes us the answer. The right recurrent nerve is situated between the right border of the trachea and the bodies of the cervical vertebræ. Evidently the impulsion of a blow from right to left would tend to force the trachea out of the way of the recurrent nerve on the right side, and unless the full force of the blow should impinge immediately on *this* nerve (which is almost impossible), no injury would be done it.

The left recurrent nerve is also deeply situated among the soft tissues of the neck, and it lies in a sort of furrow, or angle, formed by the contiguous relations of the trachea with the œsophagus. We can on this account appreciate the compressing or lacerating effect of the trachea and larynx being rapidly and violently forced into rude contact with the protecting sheath which surrounds its delicate fibres. Such, then, is our explanation of the pathogeny of the lesion of the left recurrent nerve, which holds under its sway, as we are all aware, the mobility of the left vocal cord.

With regard to the *dysphagia*, so prominent a symptom during many days, we believe it may be satisfactorily accounted for by the almost direct contusion of the pharyngeal plexus which governs, as it were, our power of normal deglutition.

Most probably the branches of the spinal accessory which animate the glosso-pharyngeal muscles and some bundles of fibres of the superior constrictor muscle, were contused, and thus the naso-pharyngeal cavity during deglutition was not closed so imperviously as it is in health.

The very fact that our patient during many days was obliged to pinch his nose in order to accomplish deglutition properly, would point to the plausibility of this explanation, and substantiates in our mind the reality of temporary paralysis of the soft palate. In a somewhat similar way a solution may be, we believe, offered of the paroxysms of cough.

The natural explanation is (as far as it goes), that particles of food, which in vulgar parlance "passed the wrong way," penetrated into the larynx whilst the patient was swallowing, and were the cause of these attacks.

But why did they enter the larynx? It may be said that owing to the concussion caused by the blow, the function of the epiglottis was interfered with, and this organ did not close the upper orifice of the larynx in that perfect way according to which this natural valve was intended to perform its proper function.

But let us remember that the action of the epiglottis is purely passive and mechanical. No muscle exerts its contractility in order to bend it down. In the movement of deglutition the larynx is drawn upwards and forwards, and at the same time the tongue is retracted, as it were, at its base, and helps in a great measure to press the epiglottis over the laryngeal opening. If, however, the glosso-pharyngeal nerve had been contused in many of its fibres (and we are now having in view the motor ones, which come to it directly from the spinal accessory), why then the sluggishness of the tongue to perform its rôle properly, is readily interpreted and the cough explained.

The *dyspnœa* which was so distressing at first, and which even now is occasionally a source of anxiety, may be attributed, without effort of the imagination, to perturbation of the trunk of one or both pneumogastric nerves. The delicate muscular fibres which encompass the smaller divisions of the bronchi have been, without much cause for doubt, partially paralyzed, and when they have been, and are, called upon to perform some extra work, during rapid or excessive breathing, they become readily fatigued. The local congestion and swelling, and the complete paralysis of the left vocal cord, which tended to narrow and diminish the normal calibre of the larynx, would explain this dyspnœa sufficiently well, but for its continuance (though not showing itself at all times), with a tolerably patulous larynx. In the case reported by Clark, among other symptoms, noted "manipulation of the larynx caused great pain, and so likewise did the effort of deglutition; aphonia was complete," but there was no choking or cough after deglutition, and no mention is made of symptoms of difficult breathing. In neither his case nor ours could any irregularity be detected when the thyroid cartilage was examined.

Crepitus, abnormal motion, intense and very limited pain or pressure, or displacement of organ, were at no period perceptible to the senses.

The reddened sputa expectorated in moderate quantities for some hours after the assault, furnish the only reason for supposing that there may have been a fracture of the hyoid bone or laryngeal cartilages. Most probably, the slight sanguineous expectoration was due to tearing of mucous membrane, or else there was laceration of, or some extravasation from, the capillaries of the interior lining membrane. Finally, we would draw attention to the fact, that the impaired audition of our patient was aggravated by the blow.

All medical men are familiar with the cough produced by introducing an ear speculum, probe, or other foreign body into the external auditory canal. This physiological phenomenon is explained by reflex action of the vagus, inasmuch as one of its sensor branches (auricular), first described by Arnold, takes origin in the superior cervical ganglion, and sends two very small divisions to the meatus auditorius.

Most authors apparently ignore the existence of a third division of the auricular nerve, which is distributed to the membrana tympani. A description of its course may be read in the remarkable treatise of anatomy by Sappey (Paris, 1852, vol. 2, p. 287). In the case we report, perturbed innervation of this branch of the vagus has evidently been one among many sequelæ, of a blow on the neck.

The prognosis of our case must, of course, depend upon the more or less nerve-trouble existing.

Have we had mere compression of the left recurrent nerve, or is laceration of some or many fibres to be considered probable?

Has there been considerable effusion of blood and plastic lymph at the time of the accident, interposing itself in the connective tissue between the nerve-fibres? Are we in danger of chronic neuritis of the left recurrent nerve, or of actual or future degeneration of the muscular tissue incorporated in the calibre of the left vocal cord?

All these questions are very difficult to answer.

In the case already quoted more than once, the patient recovered rapidly. "In about ten days she began to recover her voice; and in three weeks was quite well."

Our patient has not progressed so favorably. More than two months have elapsed since the night on which the blow was received, and he yet speaks in a low, husky, imperfect manner. Inasmuch, however, as he has improved somewhat, though slowly, as the other symptoms, so severe at first, have entirely disappeared (dyspnœa excepted), and as the general health is good, we think the prognosis should be hopeful—in the sense of ultimate recovery.

Knowing, however, the snail's pace with which the effects disappear of even less serious nerve-lesion than

is here evidently present, we doubt very much whether we ought to look with confidence to a speedy cure.

Our intention is to begin by prescribing small doses of strychnine internally, and, to aid the action of this powerful nerve-tonic, with local applications of faradic electricity, made frequently and directly to the affected cord, by means of Mackenzie's electrode.

This method of treatment, we may add, would have been commenced ere now, had the patient been more regular in his attendance at the Dispensary.

15 WEST 26TH STREET.

Reports of Hospitals.

ROOSEVELT HOSPITAL.

REPORTS OF PRACTICE AND PECULIARITIES OF TREATMENT.

(DR. LA GRAVE, HOUSE-SURGEON.)

GONORRHŒA.

INJECTIONS of the silicate of soda have been employed in the treatment of this affection in both acute and chronic stages.

℞. Silicate of soda..... grs. xx.
Aquæ..... ℥ viii.
M.

The injections were given three times a day. So far as employed, the results obtained were eminently satisfactory. No other treatment was combined with it.

ASPIRATION OF THE BLADDER.

The case was one of urethral fever following the introduction of instruments for the relief of stricture. The fever and general constitutional disturbance was so intense that it became necessary to adopt some means of relieving the bladder of urine other than the introduction of a catheter. Resort was had to the aspirator, and the bladder was emptied some four or five times by the introduction of one of the needles above the pubes. By the operation the urethra was placed perfectly at rest, and the fever soon subsided.

Another case was mentioned in which it became necessary to evacuate the bladder in some manner other than through the natural channel. The aspirator was used three or four times for that purpose. Operation, supra-pubic. The patient soon after died of the disease with which he was afflicted. At post-mortem, it was very difficult to recognize the point of puncture upon the inner surface of the bladder made by the needle, and not the slightest traces of ill-effects could anywhere be found.

ULCERS.

This class of cases, "old ulcers," are quite uniformly dressed with Labarraque's solution (liq. sodæ chlorinatæ) until the sore becomes surgically clean. The solution is to be diluted with water, according to circumstances. If then the granulations have a healthy appearance, the ulcer is strapped, and the limb bandaged. If the granulations become flabby and inactive, a dressing of balsam of Peru is applied, and over that straps and bandage. Grafting is resorted to in certain cases, when the ulcer is of some size, and, in this manner, a certain proportion are made to heal very rapidly.

BUBOES.

The treatment adopted in these cases varies somewhat from that in general use. When one of these glandular enlargements presents itself, when the skin f a bluish color, and deeply undermined, the entire covering of the excavation is removed by the knife, affected glands swept away, and then it treated as an open ulcer.

A case was seen which well illustrated the results obtained by improper management of these enlargements. The case was one of ordinary suppurating bubo. It had evidently been opened by simply plunging a lancet into it perpendicularly. Discharge of pus was apparently free, but upon examination, when the case was admitted, it was found that the pus had burrowed among the tissues until the abscess extended down upon the thigh. The anterior walls of the excavation were entirely removed. The now open ulcer was being treated with carbolized water, one part to twenty, filling the cavity with scraped lint wet in the solution, covering this with sheet lint wet in carbolized oil, one part to twelve, and over the whole a piece of oil silk. The granulating surface presented a clean and healthy appearance, and was healing quite rapidly.

BURNS.

For this class of difficulties white-lead paint seems to meet the indications of treatment as satisfactorily as any material which has been employed. This is interesting, from the fact that almost every plan of treatment which has ever been devised has been employed, and the leaning is towards the paint dressing. Mix as for painting, except considerably thicker, and apply with a brush. It is much more *cleanly* than Buck's burn mixture or Carron oil, and that is not an unimportant element in its favor. A very neat and satisfactory dressing for superficial burns consists in coating the surface with mucilage, and then covering it with powdered Lycopodium.

TRAUMATIC PNEUMO-HYDRO-PERICARDIUM.

The young man had received a stab in the pericardial region, which had penetrated the thoracic walls and entered the pericardium.

Pneumo-hydro-pericardium was soon developed.

At present he is well on the way towards recovery. The fluid has been almost entirely removed. There was remaining a loud friction sound, heard with greatest intensity to the right of the sternum. The heart was displaced towards the right. The constitutional disturbance throughout the entire progress of the case had been very slight indeed.

Pulse, temperature, and respiration had scarcely been disturbed. It was only by means of physical signs that the presence of the pericardial difficulty was recognized, and its daily changes noted. Absolute quiet in bed has been rigorously enforced, and only a trifling amount of medicine administered. The infus. of digitalis was at one time administered in drachm doses three or four times a day, and small doses of opium were added to give a little additional quieting effect. He will probably recover, if meddlesome interference is avoided.

TASTELESS COD-LIVER OIL.

℞. Cod-liver oil..... ℥ ii.
Spts. lavender co..... ℥ i.
Brandy..... ℥ i.
M.

The house-surgeon said the patients begged for it.

FOR FLATUS.

℞. Pulv. camphor,
" capsicum,
" ginger.....ää gr. i.
M.

Divide into six pills.

S. One p. r. n.

Said to afford immediate relief.

FRACTURE OF THIGH.

The best results in regard to shortening are obtained by the following treatment. If no swelling is present, place the limb at once in plaster-of-Paris splint reaching above the ilium. If swelling is present, apply Buck's extension until it has nearly or quite subsided, and then apply the permanent dressing. About the time union is to commence, if the dressing is somewhat loose, it is removed and a new splint applied. The results are very flattering.

UNUNITED FRACTURE OF HUMERUS.

The success attending the treatment of this case was at the least interesting, for *failure* had been the characteristic feature. The man was somewhat beyond the middle period of life, and of good constitutional tendencies. During the progress of the case thorough manipulation, rubbing the ends of the fragments together, had been resorted to, but without success. The extremities of the fragments had been exposed, sawed off, and wired together, but union was not secured. Necrosed portions of bone had been removed, and were followed by extra treatment for the purpose of exciting inflammatory action sufficient to cause union, but every measure adopted had failed. The limb was useless. Amputation was desired, and the operation was performed. The extremities of the fragments were found smooth and eburnated.

BELLEVUE HOSPITAL.

(Dr. Perriberry, House-Surgeon.)

FRACTURE-BED.

It was noticed that all the patients whom it was necessary to confine in bed during the progress of the treatment of fractures, were placed upon what was called the fracture-bed.

These beds are arranged in the following manner: take a couple of boards of the ordinary length for a bedstead, and sufficiently wide to give the width of an ordinary single bed, and fasten them with nails to the edges of two pieces of board about ten or twelve inches wide, and long enough to match the width of the bed. These cross-boards are fastened at a distance from each other corresponding to the inside measurement from head to foot piece of the bedstead, and form supports for the boards above. Braces extend from the lower edges of the cross-boards, or legs of the bench, to the centre of the boards upon which the patient is to lie. These are for the purpose of preventing too much spring. This bench-like bedstead is placed upon a bedstead of ordinary height, and upon this is placed a soft mattress. This arrangement elevates the patient in such a manner that the necessary dressings can be much more easily applied than upon an ordinary bed, and furnishes practically an unyielding surface.

A man fifty-seven years of age, with intra-capsular fracture of the neck of the femur, was placed upon one of these beds, and a long, lateral splint was applied while we were present.

The splint, extending nearly to the axilla, was fastened to the side of the body in the thoracic region by means of a band five or six inches in width, passing around the body, and secured by tabs or by stitching it to the covering of the splint. In order to prevent this band from becoming gathered up into a rope, a light piece of wood, as long as the band was wide, was quilted into the band near its extremities. If necessary, like pieces may be quilted-in in other places, and in such manner as not to subject the tissues to undue pressure when the band is adjusted.

MORBUS COXARIUS.

A male patient, past the middle period of life, had received an injury to his hip seven weeks previous.

Symptoms of hip-joint disease had developed. The patient was placed upon one of these fracture-beds, a moderate amount of extension applied and maintained, and he was feeling exceedingly comfortable.

UNUNITED FRACTURE OF THIGH.

An old lady had suffered from fracture of almost all the bones of her body, which were generally very fragile. Her femur upon the right side was now in an ununited condition, and it was expected that it would remain so permanently.

METALLIC STRIPS.

These little accessories in the application of plaster-of-Paris splints are regarded as being very valuable, and would commonly be employed if they could be obtained. They give strength to the splint without materially increasing its weight. Their application precludes the necessity of keeping up manual extension until the splint has set. They may be so adjusted that fenestra can be made in the splints, which will embrace a goodly share of their circumference without endangering the efficiency of the apparatus for purposes of retention. By means of these strips starch, dextrine, or other slow-drying material can be much more advantageously employed than in the ordinary manner.

BOOK-SPLINT.

The case was one of fractured leg. The splint (plaster-of-Paris) had been so adjusted that it was flexible behind, and when opened in front it was like opening a book.

The splint was applied in this manner: only sufficient number of roller bandages, covered with plaster, were employed to insure retention, and yet give sufficient flexibility behind to permit the splint to bend, and not break. Two rollers are usually sufficient. The sides of the splint are made unyielding by the addition of strips of blanket saturated with plaster mixture, or by the addition of metallic strips. The splint, when dry, can be easily cut through in front, and can then be removed, and readjusted to suit the wishes of the surgeon. It is secured in position by an external roller bandage. In certain cases this apparatus may be very useful.

Progress of Medical Science.

Sulphur in the Treatment of Acne.—Dr. Sidney Ringer says (*The Lancet*, Feb. 21): "The topical effects of sulphur ointment, or, of an iodide of the hypochlorite of sulphur, or, still better, of the iodide of sulphur of the Pharmacopœia, is most marked on *acne indurata* and acne rosacea, these effects being twofold, and even opposite, according to the stage of the eruption. If applied at the very commencement of the eruption, as soon as the little hard knot is felt under the skin, further development is arrested, and the hardness speedily disappears. For instance, if smeared over the hardness just before going to bed, in the morning scarcely

any induration will be felt, though after a time, perhaps, from exercise or the irritation from washing, much of the hardness may return, to be again removed by a new application of the ointment, so that in two or three days a papule that threatened to become of considerable size may be completely dispersed.

When, however, the nodule has advanced further, and suppuration has set in, then the effects of the ointment are much like those of the sulphides, administered internally, on boils, hastening maturition, limiting the swelling and hardness, and thus considerably curtailing the duration of the eruption. Nay, further, if rubbed over the skin, it appears to check the formation of acne spots. If rubbed over the nose and neighboring parts of the face in acne rosacea its effects are often most striking. Not only does it act as an acne indurata, but the hardened, swollen tissues become softened and reduced to a more natural state. He has found the iodide of sulphur likewise useful in bromic acne, reducing the eruption, or at least considerably reducing the size of each spot. In acne the ointment should be thinly spread over the eruption, night and morning.

On Sulphide of Potassium, Sulphide of Sodium, and Sulphide of Calcium.—Dr. Sidney Ringer speaks enthusiastically of the influence of these remedies upon the suppurative processes, such as abscesses, boils, and scrofulous sores. When sulphide of calcium or potassium is administered, a thin, watery, unhealthy discharge becomes at first more abundant, afterwards diminishing, and throughout continues thicker and healthier, possessing, indeed, the characters of "laudable" pus. The condition of the sore improves correspondingly and its healing is promoted. The sulphides appear, often, to arrest suppuration, serving to reduce inflammation, and avert the formation of pus.

The effects of these remedies are equally conspicuous in mammary abscesses, although in rare instances they appear temporarily to increase the pain—a remark which seems, sometimes, to hold good with respect to boils. But, as a rule, the pain is speedily mitigated. Singular to say, he has found these remedies of much less use in forwarding the maturation and expulsion of pus in indolent tumors. For the relief of boils and carbuncles, the tenth of a grain of sulphide of calcium, given every two hours, generally prevents the formation of fresh boils, while it lessens the inflammation and reduces the area of existing boils, and quickly liquefies the "core," so that its separation is much more speedy than usual. In some cases of deep-seated boils and abscesses of diabetes they are powerless.

A very beneficial effect appears to be exercised upon suppurating scrofulous glands in the neck. Here again they hasten the elimination of the pus, and subsequently the cheesy, scrofulous matter.

Resections of Joints during the Franco-German Campaign.—In the report of the surgical treatment and results of gunshot wounds in the 14th Army Corps of the German army, Dr. Beck, Surgeon-General, has furnished many valuable statistics, and drawn from them much sound and practical teaching. In reference to the resection of joints, he attaches much importance to the method of operating, regarding a good result as in a great measure attributable to compliance with certain fixed rules. He believes it essential that the wounds should not be large, the adjoin- tissues should not be lacerated, as few vessels as possible interfered with, and the diseased portions of bone denuded of the periosteum. In operating on the elbow and knee-joint he makes the H incision, at the wrist and ankle-joint two long incisions, and at the shoulder and hip-joint a single long incision. The preservation of periosteum is advocated on the ground that it protects the exposed surfaces of the bones from the purulent infection of the secretions in the wound, and not from the fact that it promotes the growth of new bone (which, in fact, it often fails to do). Finally, he lays great stress on a judicious after-treatment, which may, in some cases, require but a few weeks, but in others be protracted to one or more years.

The following are the results which he has tabulated: there were two resections each of the finger and metacarpal joints, and one of the wrist, all of which were successful. Of seventeen resections of the elbow-joint, only two died. Of these fourteen were classed as primary, with one death; one intermediate and two secondary, with one death, owing to repeated hemorrhages. One of these patients submitted to an amputation, but recovered. It is interesting to observe that in those operated on by the H incision the results were uniformly good; while, on the other hand, when the long incision was made, pyæmia occurred twice and secondary hemorrhage twice. Another important point to be remembered is, that the limb should be kept well supported, and very early passive movements should be avoided. In these cases the final results, so far as they could be ascertained, were satisfactory. Of eighteen resections of the shoulder-joint, eight died; of these eight were primary operations, of which three died; one was intermediate, and died; nine were secondary, of whom four died. In the three cases of primary operation, two had extensive lacerations of the shoulder-blade, from wounds by shells, and all three had symptoms of septicæmia. The operations were done some sixty hours after the receipt of the wounds. In the case of the intermediate operation the patient had been abandoned by the surgeon, and was found in the most deplorable condition. Of the secondary resections, three had pyæmia at the time of operation. The author never removed more than three inches of bone, and was always careful to secure a free exit for the discharge at the lower portion of the wound. The final results in these cases were uniformly good.

Of seven resections of the ankle-joint, all recovered satisfactorily. Of the resections of the knee-joint, of which five were primary and two were secondary, seven died. The two that survived were primary operations; one of them, however, suffered amputation subsequently, but the other had a pretty useful limb. The causes of death were pyæmia in almost all the cases. The author regards this operation at the knee-joint as unjustifiable in military surgery, except under the most favoring circumstances.

Five resections of the hip-joint were performed; four of these were secondary and one primary. A single one of the secondary survived, all the others terminated fatally. The hopes that had been entertained of this latter operation were not sustained by the experience of the campaign; and the author's views were so far modified by the results, that he would advise, in cases that are seen early, the removal only of loose fragments of bone, and possibly cleansing of the wound. Operative measures should certainly be postponed until the expectative treatment has been thoroughly tried. To promote a free discharge from the wound, a drainage-tube is advised.—*Schmidt's Jahrb.*, 11, 1873.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, May 1, 1874.

LUNACY COMMISSIONERS.

MR. PAYNE'S bill for the appointment of Lunacy Commissioners has again brought to notice the question regarding the best method of procedure in the case of persons supposed to be insane and proper subjects for asylum care and treatment. The bill provides in effect that instead of the two respectable physicians who now make the diagnosis and affidavits on which Lunacy commitments are based, certain physicians, styled Commissioners of Lunacy, shall perform these functions instead. As this question has thus again been raised, it is not improper that it should be again discussed.

The grounds on which the necessity for a change in the law is predicated are the fact that sane persons are supposed by many to be oftentimes confined in Asylums for the Insane, knowingly and with evil intent; the fact that some persons have been thus confined at least unwittingly; and the fact that oftentimes the Judge who makes the commitment does not have the means of knowing whether the examining physicians are *respectable* or not. The object of the law is the avoidance of these real or supposed evils by the appointment of examining physicians whose known integrity and whose high official position shall insure public confidence; whose experience and ability in the diagnosis of insanity shall prevent mistakes; and whose official status shall assure the Judge of their respectability.

It is possible and even probable that mistakes in diagnosis are sometimes made by physicians regarding the mental condition of certain persons. Experts in insanity sometimes differ in their views. How much more likely, then, it is that physicians of little experience in the diagnosis of mental diseases should sometimes make mistakes. Physicians also differ regarding the diagnosis of other diseases; and in such cases one party must be in the wrong. They are at least as liable to err in the diagnosis of mental diseases. As a matter of fact the commitment of sane persons to Lunatic Asylums is a rare occurrence.

But the assumption that physicians, knowingly and with evil intent, assist in procuring the commitment of sane persons to Asylums for the Insane is entirely gratuitous. The proofs of such a misdemeanor have never been adduced; and the assumption that physicians commit perjury for the sake of depriving a fellow citizen of his liberty is too monstrous for belief, without the support of positive proofs.

If the Lunacy Commissioners who might be appointed under the proposed law were really experts in insanity, it is reasonable to suppose that the number of mistakes in diagnosis would be diminished. There are other considerations, however, that are worthy of serious attention. The proposed measure would assuredly diminish the interest taken by physicians in the observation and study of such cases of insanity as came under their notice; and this would be greatly to the disadvantage both of the community and of those who make a special study of the subject.

The general practitioner of medicine has especial opportunities for observing the earliest manifestations of the disease. Not only this, but he is oftentimes acquainted with the personal history and characteristics, not only of the patient, but of all his immediate relatives. Thus he has opportunities for learning the physical, the moral and the hereditary causes of insanity. These opportunities he will improve if he have a personal interest in the subject; otherwise not. He may be of the greatest aid to those who make a special study of the subject of insanity and his active co-operation should by all means be secured.

As cases of insanity come first under the observation of the general practitioner, he should be prepared to give such advice and immediate treatment as may be required. Insanity is a disease that, in some cases at least, may be treated at home. In all cases advice is needed during the earliest stages, and before the patient can be removed to an asylum. The general practitioner should be taught that he has a responsibility in the management of these cases, instead of being made to feel that insanity is a disease with which he has no concern.

There is a still more important reason why general practitioners of medicine should be personally interested in the study of insanity and of its causes; that is, the prophylaxis of the disease. There can be no doubt that many cases of insanity might be prevented, especially in the young, if such advice regarding physical and mental hygiene were given as lies within the province of the family physician.

There is a feature, however, in the existing method for committing insane persons to asylums which would seem to be susceptible of improvement. The affidavits of two physicians are required by law. It is undoubtedly the general fact, that the family physician, or the

practitioner who first sees the patient, takes the principal part in the investigation and in the decision on the case. Whenever a second physician is called in for advice in the case of other diseases, it is usually thought desirable to secure the services of some one who has had greater experience in the particular disease in question than the family practitioner. It is thought desirable that the *consulting* physician should be specially skilled. In like manner it seems desirable, that the second, the *consulting* physician, who is to assist in deciding the important question regarding the existence of insanity and the necessity of sequestration, if insanity do exist, should be one who is specially skilled in the diagnosis of mental diseases. If this method were habitually pursued, the general practitioner would be aided, instructed, and stimulated to a further study of the subject; the observations already made by the general practitioner would be utilized, especially if all ascertained facts bearing on the case were required to be written down and transmitted to those to whose care the patient might be entrusted; the best advice attainable would be secured regarding the management and disposition of the case; mistakes in diagnosis would sometimes be avoided, and the public would be reassured.

If it were the practice to call in the best attainable talent in consultation, it would be of little importance whether the consulting physician were appointed by law or not, since the main object would be obtained. There are, however, certain duties and powers that should be defined and established by law. The affidavit of the fact of insanity should be required to be made within a specified time after the patient has been visited and the diagnosis made; a statement of the facts on which the diagnosis was founded should be written out and included in the affidavit; a separate statement being made of those facts which were observed, and of those which were obtained on the testimony of others, and there should be the power of compelling the attendance of witnesses and of examining them under oath. This last provision is required in order to insure a full understanding of certain difficult cases; and for the reason that such important decisions should not be influenced by the unsworn statements of persons who may have strong inducements to misstate the facts.

In fine, the points sought to be established are that the general practitioner should have the same duties and responsibilities as at present in the diagnosis of insanity, and in securing the sequestration of the insane; that he should be assisted by an expert in the diagnosis of mental diseases; and that certain powers should be conferred and duties enjoined by law in order to insure a proper statement of the facts, and in order that all the facts bearing on the case may be transmitted to the institution where the patient is to be treated.

American Medical Association.—The next meeting is to be held at Detroit, June 2, 1874.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 5, 1874.

Dr. Austin Flint, President, in the Chair.

USES OF BROMINE AND ITS COMPOUNDS.

The paper for the evening was read by Prof. Lewis Smith upon the "Therapeutical Uses of Bromine and its Compounds."

The paper was more particularly devoted to the consideration of Bromide of Potassium, and also almost entirely restricted to the therapeutical uses of this remedy in the treatment of diseases of children.

When a new remedy of real value is brought before the profession, as a general rule too much is claimed for it, there is a tendency to give an undue prominence to a new therapeutical agent, and some time usually elapses before it assumes its proper level, and its *actual* value becomes definitely dstermined. With regard to the bromide of potassium, it is probably as safe a remedy as can be found in the Pharmacopœia. With the exception of two conditions, namely, an irritable state of gastro-intestinal mucous membrane and organic disease of the kidney, no deleterious results will, as a rule, attend its administration. In children, this remedy may produce injurious results, if administered when the condition of kidney is present which follows scarlet fever, and its use, therefore, is to be recommended with great caution, if not entirely discarded.

The injurious results sometimes attained from a long continuation of the remedy, such as the formation of carbuncular and cutaneous eruptions, are, for the most part, temporary. The impairment of the mental faculties which is sometimes seen, was considered as perhaps being due to an anæmic condition of the nervous centres.

Loss of memory, imbecility, dimness of vision, irregular gait, etc., may be produced by large doses, or long-continued use of the remedy, but, as a rule, these effects disappear with its discontinuance.

Small doses sometimes produce marked effects which are apparently of a serious nature, but soon pass away.

Some remarks were made at this point relative to the elimination of bromine as a result of decomposition which the remedy undergoes in the stomach and intestines. The conclusion arrived at was that bromine was not eliminated in the breath or otherwise, unless the remedy met with some *unusual* compounds in the system. Combination of the remedy with an alkali, such as bicarbonate of potash, will prevent this elimination, if there is suspected danger. The remedy had been employed in the following diseases with a marked degree of success:—

CONVULSIONS OF NEW-BORN INFANTS.

Three cases were mentioned belonging to this class. In the first case, ½ gr. doses of the remedy were administered every two hours. Recovery. In the second case, two grains were given every three hours. Recovery. In the third case ½ of a grain was given every three hours. Recovery.

In cases of *trismus nascentium* the bromide is much inferior to hydrate of chloral, for occasionally a case of this affection recovers under the influence of chloral, but the bromide of potassium is of no special service.

DENTAL IRRITATION.

The remedy, in this class of cases, is so salutary in its effects, that the gum-lancet need scarcely ever be

resorted to. It is to be administered in doses proportionate to the age of the child, and repeated according to circumstances. The remedy is of service in the treatment of all local diseases except gastro-intestinal irritation and renal disease, where convulsions are threatening.

BRONCHITIS AND PNEUMONIA.

The remedy is serviceable, therefore, in the treatment of cases of bronchitis or pneumonia where eclampsia has already been developed or is imminent. It not unfrequently happens, especially in children, that a convulsion or convulsions mark the accession of these affections, and under such circumstances the bromide of potassium will, in most instances, produce very beneficial effects.

PERTUSSIS.

The eclampsia sometimes developed in the disease as the result of reflex action from general constitutional disturbance, can ordinarily be relieved by the use of this remedy.

ERUPTIVE DISEASES.

In certain cases belonging to this class, where symptoms of great nervous agitation and irritation are developed, much benefit may be derived from the use of bromide of potassium. If it is feared that its sedative effects may become too great, stimulants may be administered in combination. In general, however, the remedy would not be continued for any considerable length of time in this class of diseases, on account of the undesirable depressing effects which might be produced.

ONANISM AND SPERMATORRHŒA—MENINGITIS.

In the initial stage of this disease, before the meningeal exudation has taken place, bromide of potassium is to be regarded as being a more serviceable remedy than iodide of potassium, the remedy which has been so long employed. It has to a very great extent superseded the iodide. It is in this initial stage of the disease, however, that the most marked benefit is to be derived from its administration.

EPILEPSY.

His experience in the use of bromide of potassium in the treatment of this disease had not been very extended, but the opinion expressed was to the effect that the remedy would prove most efficient when commenced in the *earlier* stages of the disease.

In the discussion which followed the reading of the paper,

Dr. Squibb remarked as follows: It is well worth knowing that bromide of potassium, and indeed sodium and ammonium, are all of an unusual degree of purity, as found in the market, for medicinal substances which are manufactured in so large quantities. There is no material impurity found in these articles which will detract from their therapeutical usefulness. With regard to the subject of decomposition of the bromides in the *prima via*, the most common source of decomposition is not the presence of other *bases*, but the presence of *stronger acids*.

He had read of several instances where bromine had been detected in the breath and bromide of potassium in the urine, but it is altogether probable, however, that such cases are very rare. In general, the condition of the secretions is such as to protect the bromide of potassium or any of the compounds of bromine against any decomposition.

Epilepsy was the only disease in which he had had any personal experience in the use of bromide of potassium.

The history of five cases was then related, all of which were permanent in character, and had been of long duration, when the treatment by bromide of potassium under his direction was commenced. The point which he desired to make with regard to the treatment of epilepsy with this remedy was, that physicians often fail in giving patients benefits which they otherwise might receive on account of the lack of quantity administered.

In the first case, the history of which he related, it required some months to reach the doses which were necessary to arrest or materially modify the occurrence of the paroxysms; and no success was obtained in that direction until doses of from 32 to 35 grs. t. i. d. were administered. When these doses were reached the paroxysms were apparently influenced by the remedy, although not arrested.

Bromism is always to be sought before the efficacy of the remedy can fairly be said to be tested. *Bromism* varies. In one instance a sensation of sleepiness or hebitude will be produced. The patient will, perhaps, while engaged in his work, writing or whatever it may be, perform the movements of the hand, etc., somewhat slower: this will gradually increase until he finds himself borne down with a heaviness which gives an irresistible, or almost irresistible, tendency to sleep and stupor. The development of these symptoms has been so closely observed by many patients that they have been cognizant of the fact that their pen was moving slower and slower, until at last they drop off into a drowse of a few seconds' duration, and then awaken, finding the point of the pen upon the very letter where it was placed before the occurrence of the momentary loss of consciousness. These are among the earliest symptoms, and will vary in degree, still gradually increasing until other effects are developed, such as irritability of temper and mental disturbances, varying according to the circumstances and peculiarities attending each case.

To reach bromism required different doses in every case which he had observed. In one case of an inveterate nature, one which had been under previous treatment, and in whom the paroxysms were of frequent and very regular occurrence, no effect whatever was produced short of 45 grs. t. i. d.; and the maximum effect of the remedy was not reached short of 60 grs. t. i. d., continued for 10 or 15 days. Bromism occurred, but without positive arrest of the paroxysms.

When bromism has been produced an intermission in the use of the remedy can be safely permitted without lessening its effect. At the end of about ten days it should be resumed in the *maximum doses at which it was discontinued.* When bromism occurs again, the remedy should be discontinued for a short time, and then renewed, and so on. In this manner the remedy can be continued certainly for two years and a half or more without detriment.

The third case related was one in which the patient, 22 years of age, had been habitually epileptic for many years. The imbecility which had been developed seemed to be approaching idiocy. He had lost the power to either read or write, and, in brief, was in a most deplorable condition. He was also the subject of gout.

He had already been under treatment by the use of bromide of potassium, but the doses were immediately increased from 15 grs. to 35 and 40 grs. t. i. d. Very soon the paroxysms began to abate. The case illustrated another important element in the treatment of epilepsy, and that was the element of time. Good re-

sults in many cases ere *not* obtained speedily, and could only be obtained by steady perseverance until bromism had been produced, and then going back of this a little, continue the remedy for a long time. After about three years of treatment in this case the disposition to the occurrence of the paroxysms seemed to pass away, and he began to recover his mental power. Since that time he has made marked improvement, and now reads and writes nearly as well as he did before the occurrence of the epilepsy. Still the doctor did not regard either of these cases as being cured. Occasional paroxysms have occurred, although, each time, they were in obedience to some good and well recognized cause.

In the fourth case, the paroxysms occurred exclusively at night, and once a month. They were so violent that the man's shoulder was dislocated at several different times. He had been taking bromide of potassium for one year before he came under his observation. He was than advised to take 40 grs. t. i. d., and that dose was increased by 5 or 10 grs. before any effect was produced. When the desired effect of the remedy had been produced, it was continued for three or four months only, before the paroxysms were entirely suspended. In this case there was developed a peculiar kind of bromism. The patient would detect the approach of the condition by the fact that his pen, as he was writing, would begin to move slower and slower, and, if he continued writing, he would momentarily fall asleep. This man also had a staggering gait, it being the only case in which this symptom was developed. There was also some tendency to fall forward when walking.

When these symptoms were developed, the remedy was omitted for a time, and the symptoms would pass away. The remedy would then be commenced at the maximum dose, and continued until bromism was again produced. The remedy was continued in this manner, and the patient was finally free from paroxysms *for one year and a half.* The medicine was then discontinued, *but the paroxysms returned.* The patient again came under treatment, and the bromide of sodium was substituted for the bromide of potassium on account of the peculiar effect which the latter salt has upon the muscular system. He was soon free from paroxysms. A later attack and suspension of paroxysms took place, and then the patient passed beyond his observation.

The last case was in a girl, 13 years of age. She had been under treatment with bromide of potassium. The doses were increased to the production of bromism, and she had not had a paroxysm since Aug. 1873.

He did not regard any of the cases as absolutely cured and was of the opinion that *habit* had very much to do with recurrence of the attack. In people who are otherwise healthy, habit confirms, strengthens and increases the paroxysms. A long time is necessary in order to break up the disposition.

The points of importance with regard to treatment which he wished to impress were that want of success very frequently followed from insufficiency of dose, and the inefficiency with which the case is dogged out, pursued and adhered to, until it gives away.

MODE OF ADMINISTRATION.

He always employs a watery solution of the strength of 12½ grains to the fluid drachm. The solution is always filtered, for by this precaution a solution which will remain clear is obtained.

The best vehicle for the administration of the remedy is ice-cold water. He has not found any stomach which has rejected the remedy when given in this manner. It is not well to administer it too near the digestive process. It should not be administered nearer than fifteen minutes before a meal. If given immediately before a meal, there will probably be developed evidences of interference with digestion. This is a rule which, for obvious reasons, it is well to observe, with regard to the administration of any of the alkaline salts.

ITS ACTION ON THE CAPILLARIES OF THE BRAIN.

DR. CARO remarked that it was altogether probable that the bromide of potassium has been used in past years as a kind of fashionable remedy, and, perhaps, many times without very definite knowledge why it was used. At the present time, however, we have arrived at a better knowledge, and the remedy can be prescribed with a degree of certainty that we are to obtain such and such results.

The remedy is now recognized by the profession in general as being one of efficacy, and if the results obtained, when it is administered, are not what were expected, it may be from want of knowledge of the peculiar conditions of system best adapted to its use, rather than from the lack of efficacy in the remedy itself. It now seems well established that bromide of potassium has the power to produce contraction of the capillary blood-vessels, particularly the capillaries of the brain. It is important, therefore, when the remedy is to be administered, to determine, if possible, whether the brain is capable of resisting its action upon the capillaries. If the amount of blood thrown upon the brain is sufficient to produce capillary congestion, and consequent convulsions or epileptic fits, the administration of such a remedy as the bromide of potassium, which has the power to contract the capillary blood-vessels, will be of service; but if the brain is already without the proper supply of blood, the extra amount which will be removed from it by the action of the bromide of potassium will not only not benefit the patient, but will probably increase the force of the paroxysmal seizure.

The preparation among the bromides which he most favored in the treatment of epileptic affections was the bromide of zinc. It is to be administered in 15-gr. doses four times a day.

DELIRIUM-TREMENS.

If the case is one in which congestion is present, the administration of bromide of potassium will produce beneficial results. If there is no congestion, some other remedy is better adapted to the treatment of the case.

INSOLATION.

He had not become aware of the fact that bromide of potassium had ever been used in the treatment of this class of cases, until he used it in two cases, in which it was evident that congestion was present. In one case the man revived within a few minutes after the administration of the remedy.

CHOLERA INFANTUM.

In 1869 he read a paper upon this subject before the County Medical Society, in which he mentioned the bromide of potassium as an excellent remedy for the cure of this disease. Since that time he had received communications from different physicians, some of whom spoke of the remedy as being beneficial in the treatment of this disease, while others had received no beneficial results. Still, I insist, says the doctor, that whenever the cholera infantum is produced by either a congestive affection of the brain, such as obtains from exposure of the child to heat, or from conges-

tion of the gums in teething, there is no remedy more serviceable than the bromide of potassium. The medicine is very easily absorbed, and in many cases of swollen and congested gums he had rubbed it upon the parts, with the effect of easing the pain, removing all tendency to convulsions, and checking the bowels, and the children have recovered without any further trouble.

Whenever he has used the remedy in gastritis, he has obtained beneficial results. In these cases he always uses it well diluted with *cold* barley-water, which will render it more liable to be retained by the stomach.

LARYNGISMUS STRIDULUS.

In the treatment of this disease the bromide of potassium in five-grain doses, administered in the form of spray, has succeeded in his hands above all other remedies. In one case in which the remedy had been administered in this manner the child vomited and threw off a quantity of bronchial casts which were exhibited to the members of the Academy.

He advocates the use of the remedy in the treatment of diphtheria, although the profession may perhaps be inclined to regard its use in this disease as an empyricism rather than otherwise. It will, locally applied, relieve the amount of deposit and greatly mitigate the distress of the patient. He had treated one case exclusively with the bromide of potassium, and so far as the diphtheria was concerned the child was cured. The patient was doing well, when it suddenly died, probably from paralysis of the heart.

NAUSEA AND VOMITING OF PREGNANCY.

The success which he had obtained in the treatment of this condition by the use of the bromide of potassium had been most marked. In some cases the results obtained were surprisingly beneficial.

He has also found it very efficient in relieving the pain incident to

DYSMENORRHŒA.

The remedy was very serviceable in

INFANTILE REMITTENT,

administered in single doses before the return of the paroxysms. In these cases, if there was any tendency to central congestion, the remedy was certain to prevent it.

It was very useful as a local remedy in the treatment of

ERYTHEMA

of children. In

PHLEGMONOUS ABSCESS

its local application, if made early, would arrest the spread of the inflammatory process, and relieve that which was already present.

It had been questioned whether the remedy could be absorbed by the skin. It was certain to be absorbed if applied in solution at a temperature *lower than that of the blood.*

In all hyperæsthetic conditions of the skin, such as the

ITCHING OF PREGNANCY,

the local use of the remedy was of great service.

Dr. Peaslee remarked that he had used bromide of potassium in the treatment of the convulsions of new-born children with good success. But the distinction must be made between this condition and true *trismus*, which occurs later. In the latter condition he does not regard the remedy as at all reliable. There are two general propositions with regard to both effects produced by bromide of potassium.

In the first place, it is a very powerful cerebro-spinal sedative, and exercises but little influence upon the ganglionic nervous system.

In the second place, a similar effect is produced in the part to which it is applied locally.

It is therefore a beneficial agent used either generally or locally.

He does not regard it as a remedy to be *exclusively* relied upon in the treatment of disease, except in a few instances.

The combination of bromide of potassium with other remedies, in many instances, greatly increases their efficacy. For example: the bromide of potassium will be found to constantly correct the disagreeable effects of opium. In nervous women there is no more valuable remedy than the Liq. opii odorata of Dr. Squibb; but there are very many women with whom it does not at all agree. Under such circumstances, if bromide of potassium is combined with the opium, all the evil effects of the opium will be dispelled. When the bromide is used for this purpose it is necessary to give a sufficient dose to affect the brain. He usually prescribes a single large dose, which is to be taken a few hours before taking the opium.

There are some very anæmic women, upon whom the bromide of potassium will have no effect whatever.

The local application of this remedy in solution is of immense value in some cases of *pruritis vulvæ* and *vaginæ*. First, wash the parts thoroughly with warm water, and then make a topical application of any strength desirable up to a saturated solution. The soothing effect produced is very frequently eminently satisfactory.

In cases of *stomatitis*, *catarrh* of the *posterior nares* or *pharynx*, *nausea* and *vomiting* of *pregnancy*, the remedy is very serviceable. In cases of threatened

ECLAMPSIA,

which sometimes occur at the sixth or seventh month of utero-gestation, when the kidneys become inactive, it is one of the greatest safeguards against this complication which we have. Administer it in fifteen gr. doses, t. i. d.

When the eclampsia is established it is not to be relied upon.

HYPNOTIC.

The remedy is very useful as a hypnotic, but for this purpose it must be administered in such doses as will produce an effect, without any special reference to the size of the dose. Twenty to forty grains are such doses as he prescribes the first night; and if sleep is not obtained, much larger doses are given the second night. It will be found that, if the patient is in the habit of taking stimulants, much larger doses will be required to produce the desired effect. In every spasmodic cough the remedy habitually enters into the formula for his prescriptions. When the remedy is to be administered alone, it should always be given in *cold water.*

Dr. Van Kleek remarked that he had used bromide of potassium in a very large number of cases of nervous headache, the so-called "sick headache," and had found its action exceedingly beneficial.

In reply to a question from Dr. Van Kleeck, Dr. Squibb answered that bromo-camphor was of no special efficacy in the treatment of disease, and that its quackish reputation was justly on the wane.

Dr. J. C. Peters referred to the use of bromide of lithium and sodium in chronic cases, where the bromide of potassium seemed to be worn out. A favorite com-

bination with him, when the person was pale, weak, and nervous, was with the sweet wine of iron.

℞. Sweet wine of iron, ℥iv.
Bromide of potassium, ℥i.
M. Dose, fl. ʒi.

By using this combination he had been able to continue the use of the bromide of potassium where, otherwise, he would not have been able to use the remedy at all.

MENORRHAGIA.

He had found the bromide of potassium a very beneficial remedy in the control of this difficulty.

DELIRIUM-TREMENS.

He had given ℥i. of the bromide of potassium in twenty-four hours in this disease, without producing any deleterious effects, but, on the contrary, with marked benefit.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, April 8, 1874.

DR. H. KNAPP, PRESIDENT, in the Chair.

CONGENITAL MALFORMATION OF OS COCCYX—OPERATION.

DR. SAYRE exhibited a portion of the os coccyx removed by operation from a young lady aged fourteen. The patient had a malformation of the bone in question since birth, which malformation consisted in a sharp projection backwards. In consequence of this state of things she was unable to sit in an erect position except upon a soft cushion, and would even then lean forwards to be comfortable. As she grew up the attempts to assume an erect posture would bring on attacks of chorea, and she was taken from school in consequence. On examination, the end of the coccyx was found projecting outwards and backwards, covered by a thin and shining layer of skin which was so sensitive that the least touch was sufficient to produce chorœhic spasms. The operation for the removal of the malformation was done with the assistance of Drs. Blake and Yale, the periosteum being carefully peeled up and the projection sawed off. The wound healed kindly, and all the nervous symptoms ceased.

MORBUS COXARIUS.—A STRIKING EXAMPLE OF THE REPRODUCTIVE POWER OF NATURE.

He also exhibited a specimen of morbus coxarius removed post-mortem from a girl, an exsected portion of whose hip he had exhibited at the meeting of the society, held Jan. 14 (*vide* MED. REC., p. 206) shortly after the operation. She was ten years of age, and had suffered from hip disease for five years. The operation was performed more for the sake of allowing her to die easier than for any hope that it might give of recovery. She lingered along until to-day (April 8) when she died of exhaustion.

An autopsy was performed with the greatest difficulty, disclosing a very interesting pathological condition. At the time of the operation, the first section of the femur was made through diseased bone, when another portion, lower down, was removed through what appeared to be healthy bone structure. At the autopsy, the bone was found to be necrosed two inches beyond the last section, but nature had, nevertheless, made a very handsome and complete involucrum on the external aspect. The acetabulum, which was perforated at the time of the operation, was now entirely covered over by granulations. The internal periosteum corresponding to this perforation was peeled off and showed the commencement of the track of an abscess which passed underneath the neighboring muscles, as far as the posterior part of the sacrum. On the whole, no better specimen could have been presented to prove the advisability of an operation in such cases.

DR. CARO remarked that he had never heard of any such malformation of the coccyx to be due to other than traumatic causes.

VESICAL CALCULI REMOVED PER URETHRAM —CONCEALMENT OF STONE BY FOLDING OF BLADDER.

DR. CARO presented two small calculi which were of interest in a clinical point of view. One, weighing 75 grains, was extracted from a woman aged 75, who had been, for three years previous to the operation, troubled with symptoms of cystitis. She had been under the care of four physicians, all of whom agreed in calling the disease simple cystitis, and although Dr. Caro, when he was asked to attend her, suspected the existence of calculus, he was unable to substantiate the suspicion. She passed from under his charge for a while, and it was not until he was called a second time to treat her, that he was enabled to make a positive diagnosis. While withdrawing the catheter after injecting salt and water into the bladder, the instrument grated against a stone. After the bladder was empty he examined her again, but with the same result that had attended his former efforts. Dr. Little was called in consultation, but succeeded no better until the bladder was filled. When, however, the presence of the calculus was positively ascertained, Dr. Caro commenced to dilate the urethra with sponge tents. On the fourth day the calculus was extracted, the patient being during the latter part of the operation slightly anæsthetized. The failure to detect the stone when the bladder was empty was explained upon the supposition that it was enclosed by a fold of mucous membrane.

The second specimen of calculus, weighing 48 grains, was also removed from a female patient, who was aged 65. While passing water one day, there was a sudden arrest of the stream, attended with severe pain. Dr. Caro was sent for, and on his arrival found her still sitting on the chamber greatly alarmed, and suffering much pain. On examination he found the stone projecting half way through the meatus, and, with a pair of dressing forceps, removed it without the least difficulty.

DR. WARD, in connection with the first case, referred to a similar one, in which the same condition of things—the folding of the stone in the mucous coat of the bladder—was verified by the finger introduced into the bladder, during an operation for lithotomy.

DR. MASON also referred to another example of the same condition, occurring in the practice of Prof. Gross, of Philadelphia.

DR. SAYRE remarked that such cases proved the necessity of always injecting the bladder before being positive, in any suspicious cases, that no calculus existed. He had met with two, in which it had been impossible to make a clear diagnosis until the viscus had been distended by an injection.

SUBACUTE MENINGITIS—ATHEROMA OF ARTERIES AT BASE OF BRAIN.

DR. S. B. WARD presented the brain and heart of a gentleman sixty years old, who had been during the past few years under the care of a number of prominent physicians of this city. The patient had enjoyed

good health up to 1858, when he left his farm to reside in the city. The first symptoms which showed themselves were those which belonged to extreme melancholy, which were referred for the most part to his leaving his old home, and which symptoms were so persistent and severe that he was unable to attend to any business for two years. Subsequently he did well until 1861, when he began to complain of a troublesome headache. He was relieved of this latter symptom by a travelling trip, and remained well until 1865, when he again suffered from headache, with vertigo. This condition of things took him from his business for four or five months. In 1871, the pain in his head returned, accompanied by loud noises, which he likened to the roaring of waters, the clashing of thunder and the snapping of pistols. The abnormal sounds troubled him very much. From this time he was seldom well, except for a few days, the pain in the head and the noises being almost constant. Sometimes he would sit for hours together, with hands joined, rolling his thumbs over each other. Such a fit would sometimes last for weeks at a time, and would be alternated with a mood for reading, the exercise of which he was but little given to while in health. He had also attacks of insanity, which made him wild, unreasonable and, as his wife thought, dangerous. At one time he evinced a suicidal tendency, and it was only by the exercise of self-control, and walking the streets for hours at a time, that this tendency was overcome.

Dr. Ward first saw him during February 1874, when he was called to pass a catheter, the patient having at that time paralysis of the bladder, and became his regular medical attendant on the month following, continuing in that capacity until the death of the patient. There was nothing particularly new in the symptoms; there never was any fever, the pulse ranging from 70 to 80 until a few days before death, when it ran up to 100. There was never any marked increase in temperature. The patient died on the second of April, and the autopsy was made on Saturday.

The diagnosis of softening of the brain had been made by many of the physicians who had seen the case, and the specimen was of especial interest with reference to that point.

At the post-mortem nothing abnormal was noticed about the scalp or skull. The dura mater was not particularly adherent, but was very much thickened throughout; in fact, all the meninges were in that condition. About three ounces of fluid blood escaped from underneath the arachnoid, and the vessels of the pia mater were very much injected. There was no point of softening in any part of the brain. The vessels at the base of the brain were in an atheromatous condition. The spinal cord was distinctly reddened, was quite hard, and the gray matter was very indistinct. The brain itself weighed fifty-two and a half ounces. The heart was perfectly healthy, and the valves, examined with great care by Dr. Satterthwaite, were found to be sufficient. On laying open the aorta a very pretty specimen of atheromatous degeneration in all its stages was observed. This condition extended into the innominata, left carotid, subclavian, and probably into all the arteries of the body. The lungs contained deposits of tubercles, recognized during life, and at the apex of the right lung there was a distinct cicatrix, as if a cavity had healed. The bronchi were in the condition of chronic inflammation. The kidneys were contracted.

Dr. Satterthwaite, in answer to a question from Dr. Shrady, remarked that there was a new formation of vessels in the arachnoid.

In answer to a question from Dr. Knapp as to the existence of any disturbance in sight, Dr. Ward remarked that four days before death the patient insisted upon having the gas lit at noon, complaining of the darkness of the room, and from that time it was quite evident that there was total blindness.

Dr. Knapp referred to a case in which the remarkable symptoms of nasal hemiopia was present, due to the presence of atheromatous arteries embracing the outer portion of the optic chiasm.

Dr. Ward, also, in this connection stated that the specimen which he had presented for membership to the Society was one in which a cancerous tumor of the brain was in such a situation directly over the optic commissure, that when sitting up the growth so pressed upon that nerve-centre, as to entirely destroy vision, which condition was relieved while in the recumbent position. The patient was the son of a well-known clergyman of this city.

CANCER OF THE CONJUNCTIVA.

Dr. Knapp exhibited a specimen of cancer of the conjunctiva, sent to him by Dr. Chapman, of Medina, N. Y. It was removed from a man seventy years of age, who in March, 1872, received a slight injury to the outer part of his eye, by a chip, while chopping wood. The inflammation of the part which followed soon subsided, and no inconvenience was experienced for four or five months. At the end of that time a small tumor made its appearance at the seat of injury, and in the course of five months gradually increased in size, until it encircled the cornea in its outer and upper portion. Then it gave rise to intense and persistent pain so that the patient insisted upon the removal of the eye, which operation was performed last May. The tumor extended back towards the equator two or three lines into the conjunctiva, and the cornea was opaque. The specimen was sent to Dr. Knapp for examination, who discovered it to be a case of epithelial cancer commencing in the conjunctiva and extending into the cornea at its junction with the sclerotic, penetrating into the corneal corpuscles and dilating them, presenting under the microscope a beautiful anastomosis of strings of epithelioid cells. The specimen was very satisfactorily exhibited under the microscope to the members.

Dr. Elsberg, in remarking upon the specimen, thought it of great interest, particularly in regard to fixing the fact of the traumatic origin of cancer. He had seen a similar case ten years ago.

The Society then went into Executive Session.

Correspondence.

NOTE ON THE HISTORY OF SYPHILIS.

To the Editor of The Medical Record.

Sir,—The following note on the history of syphilis, kindly sent me by Frank L. James, Ph. Dr., M.D., Osceola, Miss. Co., Ark., deserves to have been communicated directly to your journal, and I desire to give it the same publicity which only the modesty of my correspondent prevented him from doing. The fact that syphilis was regarded as a new and hitherto unknown disease by the physicians of the latter part of the fifteenth century, and was believed to have arisen at the siege of Naples, is universally acknowledged even by the advocates of its more ancient ori-

gin, but the quaint and additional items of proof here adduced cannot fail to be of interest:

"I have taken the liberty of addressing you for the purpose of pointing out a few links in the chain of evidence tending to show that syphilis had its origin in Naples, or at least that it was carried thence to France by the soldiers of Charles VIII. Francis Rabelais, one of the first physicians of his time, a man of wonderful erudition and a great traveller, mentions the pock (vérole) in almost every page of his remarkable book, 'Gargantua and Pantagruel.' One of his heroes (Panurge) frequently speaks of his 'having the blessed fruit of the great pox,' of 'having gathered the ripest,' etc. In several places he speaks of having 'been anointed' for the pox, and in one instance he speaks of 'mercury being the patron of all those that have the great pox,' showing that as early as his time this specific was known.

"Now Rabelais was born in Chinon about 1480, and when Charles VIII. and his soldiers returned from Naples, was a youth of some fifteen years of age. He was wonderfully precocious, and even at that age was far ahead of most of the physicians of his day.

"In M. le Duchat's *Vie de Rabelais*, the following anecdote is told of him: Kneeling one day in front of a statue of Charles VIII. in a church at Mézières (I think it was), a monk, thinking that Rabelais mistook the figure for a statue of a saint, went to him to apprise him of his error. 'I am not so much of a blockhead as thou thinkest me,' replied Rabelais; 'nor yet so blind as not to know that I am kneeling before the statue of King Charles VIII., for whose soul I am praying, *because he brought the pox out of Naples* into France, by which I and other physicians have been great gainers!'

"A great many stories of Rabelais are apocryphal, but this one is told as true, and from his well-known character bears the impress of truth. It is alluded to by Budé (author of Epistolæ Græcis), Sorel in the Bibliothèque Française, and I believe finds a prominent place in all editions of Rabelais.

"Here, then, we have the testimony of the most learned physician of his time, a contemporary of Charles VIII., and of the appearance of the pox, who unequivocally says that it came out of Naples."

Respectfully yours,

F. J. BUMSTEAD.

32 W. 26TH ST., NEW YORK, March 13, 1874.

THE COMPARATIVE VALUE OF MOLESWORTH'S DILATOR.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR—I desire to call the attention of the profession to a dilator invented by Dr. Wm. Molesworth. He designed it especially as a substitute for Barnes's dilator for the uterus, but it may be applied with equal or greater advantage to other organs. First, as to its relative value as a dilator of the uterus. A case in which I had occasion to use it a couple of weeks ago will demonstrate one of its advantages over Barnes's instrument. It was a protracted case of labor, in which the delay was occasioned by an unusually tedious dilatation of the cervix, after it had proceeded naturally to a certain extent. Having no medical assistance, I attempted to dilate with Barnes's dilator, which I have always found to be a very reliable, though sometimes a troublesome instrument, but, having to use the pump, and handle the stop-cock with one hand, while I attempted to keep the dilator *in situ* with the other, I had to desist, after it had repeatedly slipped in and out of the uterus, generally the former. In the earlier stages of pregnancy and of labor this difficulty, however, is not so likely to occur. I now sent for my Molesworth dilator, passed in the largest size easily, held it in place with one hand, while I pumped in syringeful after syringeful of water, until seven were introduced (not using the screw at all), without any delay or a single slip. In fact, it is almost impossible for it to slip, for two reasons: one, the firm handle (the syringe) by which it is held, or the rod attached to the syringe, and the peculiar surface presented by the rubber tube, very different from that of Barnes's bags. If it be discovered, after the dilatation and consequent *shortening* of the tube, that it has been introduced a little too far into the uterus, it may be drawn gradually out, pushing the cervix with the fingers of the other hand gently over it, as we sometimes do over the head of the child in the natural process. This manœuvre cannot be practised with the other instrument. This instrument is therefore preferable for the *country* practitioner, who is often compelled to act without medical aid; but is a more powerful instrument, and requires a little more care. Another advantage, and no mean one for the country physician especially, is the lessened liability to rot and become useless, when not frequently employed, since the sides of the tubes do not come into contact, and they dry more readily when left exposed for a time after draining.

I have been much pleased with its comparative superiority over the rubber *rectal* dilator of Whitehead. I have lately been using both in the same case; and though the latter, *with the addition of the silk bag* described by this writer, gave good results, I found the former more convenient and more effective, but of course requiring a little more care and judgment.

Seeing at once the adaptability of this instrument to the treatment of strictures of the *œsophagus*, I immediately had Mr. Stohlmann, of the firm of Tiemann & Co., prepare for a case which I had on hand, an œsophageal tube which fits the instrument, and by means of which his smallest tube can be passed into almost any stricture which may present itself at any point of the œsophagus. His tubes are so small that they obviate entirely the necessity for sponge-tents as preparatory to the dilatation of the cervix uteri, or of conical bougies in stricture of the œsophagus.

It has recently been recommended by several writers, as by Dr. Ellinger, of Stuttgart, and by Dr. William Ball, of Brooklyn, New York, to dilate the cervix uteri "forcibly and rapidly," for the relief of dysmenorrhœa, and for other purposes; and they describe instruments designed by them for that purpose; but I doubt if any metal instrument can equal, in safety or efficiency, India-rubber tubing distended by hydraulic pressure.

In the February No. of the *London Lancet* (Am. edit.), J. Joap, of Australia, describes a new dilator for stricture of the œsophagus, "combining the principles of Thompson's urethral dilator and the bougie à boule." With this he succeeded well. But it is manifestly far inferior, in safety at least, to the one here recommended; first, because it is *straight* and *rigid*, secondly, because it cannot dilate as uniformly; and thirdly, because in withdrawing, it is apt to entangle and injure the mucous membrane.

FREDERIC D. LENTE, M.D.

COLD SPRING, March 15th, 1874.

AMERICAN MEDICAL ASSOCIATION.—The Committee of Arrangements at Detroit propose to make the coming meeting a model one.

ARTICLES IN OUR EXCHANGES.

ANATOMY AND PHYSIOLOGY.

Nervous system. JAMES GUILD. *Atlanta Med. and Surg. Jour.*, February, 1874.

The styloid muscles and anæsthetics. G. W. COPELAND. *The Bost. Med. and Surg. Jour.*, xc., 9.

PATHOLOGY AND PRACTICE OF MEDICINE.

Expulsion of large uric calculus. WALKER. *Atl Med. and Surg. Jour.*, February, 1874.

Medical treatment of gravel and calculi. JAMES PYSON. *The Western Lancet*, February, 1874.

Pleuro-pneumonia, with paracentesis. CHAUNONHOUSE. *The Can. Med. Rec.*, February, 1874.

Fatal case of gastrorrhagia. J. B. MATTISON. *The Med. and Surg. Recorder*, 887.

Report on thirty cases of chorea. GEO. S. GERHARD. *Phila. Med. Times*, 114.

Hepatic neuralgia. HENRY BOGUE. *The Canada Lancet*, March, 1874.

Postural treatment for distention of the intestines with gas. C. P. PARKES. *The Chicago Med. Jour.*, March, 1874.

Obscure cerebral disease. H. S. DAVIS. *The Med. Examiner*, March 1, 1874.

Delirium tremens. D. MCMARSHALL. *Ibid.*

Epidemic meningitis, as it occurred in Springfield, Mo. J. E. FEFET. *The St. Louis Med. and Surg. Jour.*, March, 1874.

Adynamic fever. F. K. BAILY. *Nash. Jour. of Med. and Surg.*, February, 1874.

Idiopathic or primary glossitis. THOS. LIPSCOMB. *Ibid.*

Gastralgia treated by central galvanism. GEO. M. BEARD. *The Bost. Med. and Surg. Jour.*, March 5, 1874.

Case of small round-celled sarcoma. CHARLES B. NAUCREDE. *Phila. Med. Times*, 123.

Diagnosis of abdominal and pelvic tumors. J. C. REEVE. *Am. Practitioner*, March, 1874.

Local treatment of pulmonary cavities by injections through the chest-wall. WILLIAM PEPPER. *Phila. Med. Times*, 124.

Cases of aphasia with hemiplegia. C. SEYMOUR. *Ibid.*

Multiple abscesses of the liver mistaken for gastric cancer. D. W. CRUMB. *The Med. and Surg. Reporter*, 889.

Diabetes mellitus. L. S. BLACKWELL. *Ibid.*

A case of malignant œdema. T. B. CURTIS. *The Bost. Med. and Surg. Jour.*, March 12, 1874.

Encephaloid tumor of the great omentum. DAVIS HALDERMAN. *The Clinic*, vii. 11.

Acute and chronic albuminuria. J. B. BAIRD. *Atlanta Med. and Surg. Jour.*, March, 1874.

Malarial fever, accompanied by diarrhœa and followed by inflammation of the brain. J. C. BURROUGHS. *Ibid.*

Neuralgia of the trigeminus. L. JACOBI. *The Am. Jour. of Dent. Sci.*, March, 1874.

Tolerance of disease. AUSTIN FLINT. *The Am. Practitioner*, January, 1874.

A case of impacted gall-stone. H. R. HOPKINS. *Ibid.*

Post-mortem changes *vs.* ante-mortem lesions. D. E. CHAILLE. *New Orleans Med. and Surg. Jour.*, March, 1874.

Yellow-fever epidemic of Memphis, Tenn., in 1873. L. R. LEMONNIER. *Ibid.*

Reply to Prof. Jos. Jones, on the treatment of yellow fever. T. LAYTOIS. *Ibid.*

SURGERY.

Case of thoracentesis. G. C. SMITH. *Pacific Med. and Surg. Jour.*, February, 1874.

A case of aneurism of the aorta in a female. HENRY GIBBONS. *Ibid.*

Aneurism of femoral artery—puncture—ligation of external iliac. P. D. ANTHONISZ. *Ibid.*

Case of traumatic tetanus treated with calabar bean. CHARLES B. BRIGHAM. *The Western Lancet*, February, 1874.

Compound comminute fracture of the leg. P. W. RANDALL. *Ibid.*

Cleft palate and polypus in a new-born child. R. P. DAVIS. *The Clinic*, vi., 8.

Case of diphtheria successfully relieved by laryngotomy. H. A. JOHNSON. *The Med. Examiner*, Feb. 15, 1874.

A case of spina bifida cured by aspiration and injection of iodine. CHAS. M. ELLIS. *Phila. Med. Times*, 114.

A new theory concerning the proximate cause of the enlargement of the prostate body. JOHN STOCKTONHOUGH. *Ibid.*, 120.

Operation for formation of artificial false joint. S. EAGAN. *The Rich. and Louis. Med. Jour.*, February, 1874.

Inflammation. F. PASCHAL. *Ibid.*

Amputation of thigh by Esmarch's bloodless operation. PAUL F. EUE. *Ibid.*

Injury of brain, with partial insensibility and aphasia, lasting eighteen days. J. H. MCKAY. *The Can. Lancet*, March, 1874.

Case of dislocation of the ulna backwards. N. BRIDGE. *The Chicago Med. Jour.*, March, 1874.

Foreign bodies in the air-passages. D. N. KINSMAN. *The Clinic*, No. 10.

Extraction of a minie-ball from the bladder. J. W. HAMILTON. *The Clinic*, vi., 11.

The conical, olive-pointed, gum-elastic bougies in the treatment of organic stricture. JOHN T. WALL. *Atlanta Med. and Surg. Jour.*, March, 1874.

Case of false aneurism of the femoral artery. H. D. SCHMIDT. *New Orleans Med. and Surg. Jour.*, March, 1874.

OBSTETRICS, DISEASES OF WOMEN AND CHILDREN.

Treatment of puerperal convulsions. C. T. DEANER. *The Western Lancet*, February, 1874.

A case of neuriasis. THEODORE W. FISHER. *The Bost. Med. and Surg. Jour.*, xc., 9.

Case of restoration of the perinæum. J. T. EVERETT. *The Med. Examiner*, Feb 15, 1874.

Cæsarian section. TRENHOLME. *The Can. Med. Rec.*, February, 1874.

Puerperal mania. T. H. MAYO. *The Southern Med. Record*, February, 1874.

A case of impregnation without intromission. THOMAS HAY. *Phila. Med. Times*, 114.

Chloroform in labor. A. W. REESE. *The Kansas City Med. Jour.*, Feb., 1874.

Infants; their food and its digestion. ALEX. S. VON MANSFELDE. *The Chicago Medical Journal*, March, 1874.

Labor, puerperal fever, and death. GEO. J. MUNROE. *Ibid.*

A late epidemic of child-bed fever; connection between puerperal fever and erysipelas. T. C. MINOR. *The Cincin. Lancet and Observer*, March, 1874.

Case of medullary cancer of both ovaries. GEORGE HOLMES BIXBY. *The Bost. Med. and Surg. Jour.*, March 5, 1874.

Analysis of one hundred cases in obstetric practice. J. H. BLATNER. *Phila. Med. Times*, 123.

Labor complicated by the presence of the hymen. E. P. BERNARDY. *Ibid.*

Case of fibroid tumor of the uterus, with interesting history. JAMES TYSON. *Phila. Med. Times*, 124.

Congenital deformity from impressions upon the mind of the mother. FRANKLIN STAPLES. *The Northw. Med. and Surg. Jour.*, March, 1874.

Case of retroflexion of the uterus in the third degree, causing sterility; treatment; pregnancy, etc. SAMUEL B. WARD. *The Am. Jour. of Obstet. and Dis. of Women and Child.*, February, 1874.

Prolapse of the umbilical cord, cause and treatment. GEO. J. ENGELMANN. (Cont.) *Ibid.*

Early pregnancy. ROBERT P. HARRIS. *Ibid.*

Case of puerperal eclampsia. R. A. CLEEMANN. *Ibid.*

Case of ovarian hernia. BENJ. MCCLUER. *Ibid.*

Case of cystic tumor of the uterus. M. D. MANN. *Ibid.*

Report on diseases of females. HIRAM NAUSE. *The Med. Examiner*, Jan. 15, 1874.

Rupture of perinæum—spontaneous cure. W. W. CLEANER. *The Am. Practitioner*, January, 1874.

Dysmenorrhœa. WALTER COLES. *Ibid.*

Vesico-vaginal fistula. M. SCHUPPERT. *New Orleans Med. and Surg. Jour.*, March, 1874.

Atresia vaginæ. *Ibid.*

Treatment of procidentia uteri. F. WILHOFT. *Ibid.*

SYPHILIS AND DERMATOLOGY.

Tinea sycosis. JULIUS J. LAMADRID. *Phila. Med. Times*, 114.

So-called psoriasis syphilitica. LOUIS A. DUHRING. *Ibid.*, 120.

Treatment of syphilitic iritis. A. D. WILLIAMS. *The Rich. and Louis. Med. Jour.*, February, 1874.

Congenital syphilis in six successive infants. WM. T. TAYLOR. *The Am. Jour. of Obstet. and Dis. of Wom. and Chil.*, February, 1874.

Before gestation. S. DUNCAN BULKLEY. *Ibid.*

OPHTHALMOLOGY AND OTOLOGY.

Case of intra-ocular tumor. GEORGE H. POWERS. *The Western Lancet*, February, 1874.

Malignant disease of the ear with paralysis of cranial nerves. GEORGE C. HARLAN. *Ibid.*

Astigmatism. S. M. BURNETT. *The Southern Med. Rec.*, February, 1874.

Ophthalmic miscellany. A. D. WILLIAMS. *The Cincin. Lancet and Observer*, March, 1874.

Melanotic sarcoma of the choroid. N. S. DAVIS. *The Med. Exam.*, March 1, 1874.

Cases illustrative of mastoid inflammation. J. ORNE GREEN. *The Boston Med. and Surg. Jour.*, January 22, 1874.

Ophthalmoscopic optometry, and description of a new ophthalmoscope. H. KNAPP. *Archs. of Oph. and Otol.* III. 2.

The derangements of motion following division of the semicircular canals. LOEWENBERG. *Ibid.*

Embolism of the central artery of the retina. J. SAMELSOHN. *Ibid.*

On a particular form of hemorrhagic glaucoma. SHROEDER. *Ibid.*

Removal of gravel-stones which had lain in both external auditory canals for seven years. SARA E. BROWN.

Pathology of choroiditis. H. F. B. KORTÜM. *Ibid.*

Sarcoma of the iris. ARGYLL ROBERTSON. Plate. *Ibid.*

Intra-ocular hemorrhage, with formation of amyloid bodies, etc. H. KNAPP. Plate. *Ibid.*

Galvano-cautery in ophthalmic surgery. J. SAMELSOHN. *Ibid.*

The connections between the ossicles of hearing. GUSTAV BRUNNER. Plates. *Ibid.*

Pathology and pathological anatomy of the organ of hearing. S. MOOS. *Ibid.*

Supplement to description of an improved lid-forceps. KNAPP. *Ibid.*

Modification of Snellen's entropium forceps. ARGYLL ROBERTSON. *Ibid.*

Old eyes made new. CHAS. A. ROBERTSON. *Buffalo Med. and Surg. Jour.*, Feb. 18, 1874.

MATERIA MEDICA, THERAPEUTICS AND TOXICOLOGY.

Cincho-quinine. J. B. BAIRD. *Atlanta Med. and Surg. Jour.*, Feb., 1874.

Use of atropia in ophthalmic practice. ED. M. CURTIS. *Pac. Med. and Surg. Jour.*, Feb., 1874.

Treatment of scarlatina. HENRY GIBBONS. *Ibid.*

Antagonistic effects of belladonna and opium. H. WARDNER. *The Med. Examiner*, Feb. 15, 1874.

Citrus aurantium. JOSEPH BATES. *The Jour. of Mat. Med.*, Feb., 1874.

Chloroform and ether. J. H. WEIR. *The Southern Med. Record*, Feb., 1874.

Gelseminum. G. D. HODGE. *Ibid.*

The uses of "Phylotacca decandra." C. H. VIDD. *Ibid.*

Effects of carbolic acid in a large dose. S. J. RADCLIFFE. *Phila. Med. Times*, 114.

Tobacco. LEWIS WILLIAMS. *Indiana Jour. of Med.*, Feb., 1874.

Convulsions successfully treated by the chloride of gold and sodium. J. F. MORTON. *The Kansas City Med. Jour.*, Feb., 1874.

Chloroform-poisoning. H. J. SAUNDERS. *The Canada Lancet*, March, 1874.

Ammonio-citrate of iron. CHARLES URMEY. *Can. Pharmaceut. Jour.*, March, 1874.

Phosphate of iron and its combinations. C. G. POLK. *Ibid.*

Use of gelseminum in the treatment of intermittent fever and irritable bladder. JAMES D. MCGAUGHEY. *Phil. Med. Times*, 123.

Nitrous oxide in prolonged surgical operations. D. H. GOODWILLIE. *Johnston's Dent. Miscellany*, March, 1874.

Cases in medical and surgical electricity. GEO. M. BEARD. *The Med. and Surg. Reporter*, 889.

Treatment of dysentery by large doses of ipecac. THOMAS M. WOODSON. *The Am. Practitioner*, Jan., 1874.

Biniodide of mercury in secondary syphilis. M. SCHUPPERT. *The New Orleans Med. and Surg. Jour.*, March, 1874.

Concentrated and palatable powders. J. W. SOUTHWORTH. *Buffalo Med. and Surg. Jour.*, Feb., 1874.

HYGIENE.

Defective drainage, with maps. Report of the committee on hygiene, Med. Soc. of the State of New York, and discussion thereon. W. H. BAILEY. *The Sanitarian*, March, 1874.

Cholera hygiene. ELY MCCLELLAN. *Am. Practitioner*, March, 1874.

Colorado as a healthy resort. CHAS. DENISON. *The Med. Examiner*, Jan. 15, 1874.

MISCELLANEOUS.

On what was found in the alimentary canal of lucioperca. HENRY C. CHAPMAN. *Phila. Med. Times*, 114.

Specialty and specialists. C. B. CHAPMAN. *The Kansas City Med. Jour.*, Feb., 1874.

The healing art, as practised by the Indians of the plains. FORDYCE GRINNELL. *The Cincin. Lancet and Observer*, March, 1874.

Methods of illustrating statistics. H. B. BAKER. *The Penins. Jour. of Med.*, March, 1874.

A case of habitual regurgitation simulating ruminations in lower animals. D. W. GRAHAM. *The Med. Examiner*, March 1, 1874.

Rationalism in medicine. J. F. TODD. *Ibid.*, Jan. 15, 1874.

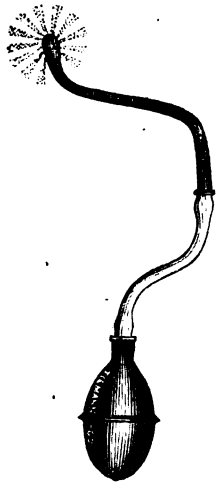
Race and nativity in certain diseases. S. S. HERRICK. *New Orleans Med. and Surg. Jour.*, March, 1874.

New Instruments.

IMPROVED POSTERIOR NARES SYRINGE.

By L. C. WARNER, M.D.

I WISH, through the columns of THE MEDICAL RECORD, to describe an improved syringe for making applications to the nares and pharynx, which I think possesses several advantages over any other instrument heretofore employed for this purpose. Messrs. Tieman & Co. first constructed this syringe for me several years ago, and I have since used it quite extensively in my own practice, but I am not aware that any description of it has ever been published so as to make it generally known to the profession. It consists of a hard-rubber point or mouthpiece, connected to a common rubber bulb by about six inches of rubber tubing. The hard-rubber point is about seven inches in length, and terminates in a small, olive-shaped bulb, which is perforated by several small holes. One peculiarity of this point is, that it has two curves, passing in reverse directions, as shown in the accompanying plate: one an inch from the olive-shaped bulb, and the other about two inches from the opposite end. The space between the two curves is about equal to the distance between the pharynx and lips, so that when the syringe is introduced into the mouth, the point passes up behind the uvula, while the opposite end drops down in the direction of the chin.



The principal advantage of this instrument over the ordinary posterior nares syringe is the greater ease with which it may be used. The shape of the syringe is such that, being introduced into the mouth, the point naturally finds its way up behind the palate. Besides, in discharging the syringe, the point can be held perfectly still —a result which it is impossible to obtain with a piston syringe.

The difficulty of using the ordinary posterior nares syringe is so great that it has never come into general use, but its place has largely been taken by Thudichum's apparatus, or what is commonly called the nasal douche. I do not propose here to discuss the relative merits of these two methods, but will only say that careful observation and experiments have satisfied me that applications made from behind the palate are used with less discomfort, and cleanse the cavities of the posterior nares much more thoroughly than those made from the nostril. I also fully concur with Dr. Roosa in the opinion that the posterior nares syringe is a much safer instrument than the nasal douche.

My principal object in devising this syringe was to get an instrument which patients could use in their own throats. I found many of my patients so situated that they could not visit me oftener than once or twice each week. This, in most cases, was frequent enough for the stronger applications; but I desired, in addition, to keep the parts thoroughly cleansed by using mild applications, like salt and warm water, two or three times each day. In supplying this want, the syringe has more than met my expectations. Patients, after a little instruction and a few trials, will use it better on themselves than the physician can use it for them.

In connection with the use of the syringe, I have found great benefit from gargling the throat after the method recommended by Prof. Troltsch. This method may be briefly stated as follows: Let the patient sit, or better, lie down, with the head thrown well backward, and, taking a small swallow of water, make repeated swallowing motions, without, however, admitting the water into the stomach. This method will be found to reach and cleanse the pharynx much more thoroughly than the noisy gargling usually practised.

119 WEST FORTY-FIRST STREET, NEW YORK.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 5, 1874, to April 18, 1874.

BAXTER, J. H., Chief Medical Purveyor.—To report to the Surgeon General for assignment to duty. S. O. 83, A. G. O., April 16, 1874.

HEAD, J. F., Surgeon.—Granted leave of absence for 20 days, on Surgeon's certificate of disability. S. O., 65, Dept. of Dakota, April 3, 1874.

HEGER, A., Surgeon.—In addition to his present duties, during absence of Surgeon Head, to perform the duties of Medical Director of the Department. S. O. 65, c. s., Dept. of Dakota.

BAILY, J. C., Surgeon.—To report in person to the Commanding General Dept. of the South for assignment. S. O. 78, A. G. O., April 10, 1874.

BROWN, H. E., Assistant Surgeon. Granted leave of absence for 30 days, with permission to apply for an extension of 30 days. S. O. 52, Dept. of the Gulf, April 1, 1874.

MIDDLETON, P., Assistant Surgeon.—Relieved from duty in Dept. of the South, and to report in person to the Commanding General Dept. of Texas for assignment. S. O. 78, c. s., A. G. O.

DEWITT, C. Assistant Surgeon.—To report in person to the Commanding General Dept. of the South for assignment. S. O. 78, c. s., A. G. O.

GIRARD, A. C., Assistant Surgeon.—Granted leave of absence for four months with permission to go beyond sea, on Surgeon's certificate of disability. S. O. 79, A. G. O., April 11, 1874.

POPE, B. F., Assistant Surgeon.—Relieved from duty in Dept. of the South, and to report in person to the Commanding General Dept. of Texas for assignment. S. O. 78, c. s., A. G. O.

CAMPBELL, A. B., Assistant Surgeon.—Assigned to duty at Ringgold Barracks, Texas. S. O. 54, Dept. of Texas, March 30, 1874.

STEINMETZ, W. R., Assistant Surgeon.—Relieved from duty in Dept. of Texas, to proceed to Baltimore, Md., and, on arrival, report by letter to the Surgeon General. S. O. 78, c. s., A. G. O.

HARVEY, P. F., Assistant Surgeon.—Relieved from duty in Dept. of Texas, to proceed to Burlington, Iowa, and, on arrival, report by letter to the Surgeon General. S. O. 78, c. s., A. G. O.

Medical Items and News.

CREMATION.—The cause of cremation (writes a German correspondent of *the British Med. Jour.*) appears to be rapidly gaining ground. The merits of the new system of disposing of dead bodies are shortly to be tested by practical experiment in Saxony, the two principal towns of which, Dresden and Leipzig, have offered to legalize it, as an optional course, supposing its advocates can practically make good their assertions in its favor. A furnace for cremation is now actually in process of construction by Herr Friedrich Dremens, a Civil Engineer. Its cost is estimated at 5,000 marks, or £250; and it is calculated that the complete combustion of a human corpse will take about an hour. The number of persons who have enrolled themselves as members of the Cremation Society in Zürich amounts to at least four hundred. Professor Weith has gone to Italy, to consult with the professors there who are engaged in studying the practical methods of burning the body.

A Philadelphia paper of the 19th inst. contains a long account of an instance of cremation in that city. A physician, whose son died on the Tuesday previous, erected a furnace in the cellar of his house, and reduced the body to ashes.

DR. B. W. MCCREADY.—(*Extract from minutes of Medical Board of Bellevue Hospital.*)—Dr. Clark, Chairman of the Committee on the resignation of Dr. McCready, presented the following report:—

The Medical Board of Bellevue Hospital cannot part with their long-tried and so worthy associate, Dr. Benj. McCready, without expressing their regret that he has found himself compelled by resignation to sunder official relations which have been in a high degree agreeable and profitable to all its members.

In twenty-five years of associated labor they have learned to aprpeciate him as a scholar, a learned and skilful physician and a gentleman. The example of his punctuality in duty, the application of his large stores of medical knowledge to the relief of the sick, his wise counsels in the management of the hospital, his uniform courtesy to all his colleagues, his kindness and devotion to the sick under his charge, the clinical instruction by which he has greatly aided in forming and storing the minds of the hospital pupils and his professional eminence are the prosperity of the institution, and make up part of its history.

In his retirement from hospital duties he takes with him the highest respects and the best wishes of this Board.

A. CLARK,
Chairman of Committee.

ISAAC E. TAYLOR,
President of Med. Board.

ACTION AT LAW FOR A DEATH FROM CHLOROFORM.—A Madame Caron some months since was taken by her husband to a dentist at Lille, to have a tooth drawn. Chloroform was administered in his presence, and his unfortunate wife died. The dentist was condemned by the Criminal Tribunal at Lille to a month's imprisonment and 500 francs fine for "homicide by imprudence." On appeal, the imprisonment was struck out of the sentence. Thereupon the husband, although he had completely authorized the use of the chloroform, brought a civil action for damages, demanding 20,000 francs in his own interest and that of a son, a minor. The tribunal, considering the fact of homicide by imprudence having been established by the judgment of the criminal court, condemned the defendant to pay 4,000 francs damages, 1,000 to go to the husband and 3,000 to be put out at interest for the son until he attained his majority.—*Union Méd.*, December 11.

ALUMNI ASSOCIATION OF THE ALBANY MEDICAL COLLEGE.—We have received a circular addressed to the Alumni of the Albany Medical College, together with a copy of the Constitution and By-Laws of the Alumni Association. The circular requests all graduates to send to the Secretary, Willis G. Tucker, "*without delay*, their present addresses, and also those of other graduates with whom they may be acquainted, especially of those in their immediate vicinity." It is proposed making a complete catalogue of the Alumni.

HOSPITAL APPOINTMENTS.—The following is a list of the recent appointments to the resident staff of Bellevue and Charity Hospitals:

Bellevue: Fred. S. Dennis, A.B., M.D., Junior Assistant; Geo. F. Bates, M.D., G.M. Stoeckel, M.D. G. R. Metcalfe, A.B., M.D., J. M. Hills, A. B., M.D. F. C. Ainsworth, M.D., R. F. Dearborn, A.M., M.D., Provisionals.

Charity: Dr. M. A. Alvarez, J. R. Joininez, Nicholas C. Jobs, Francis Hustase, Wm. D. Spencer. James J. Delancy, Edward T. Ely and Edward M. Hill.

RETIREMENT OF PROF. HYRTL.—Dr. Hyrtl, the eminent professor of anatomy in the University of Vienna, delivered his final lecture on the morning of the 16th of March, and in the afternoon of the same day met an assemblage of over three thousand pupils and friends, who presented him with addresses and other evidences of esteem. He was the recipient also of over fifty congratulatory telegrams from various parts of the world, and on the following day the municipal council of the city conferred upon him honorary citizenship.

New Publications.

BOOKS RECEIVED.

MANUAL OF TOXICOLOGY, including the Consideration of the Nature, Properties, Effects, and Means of Detection of Poisons, more especially in their medico-legal relations. By JOHN J. REESE, M.D., Prof. Med. Jurisprudence and Toxicology in University of Pa., Phila.: J. B. Lippincott & Co., 1874.

EMERGENCIES AND HOW TO TREAT THEM: Etiology, Pathology, and Treatment of the Accidents, Diseases and Cases of Poisoning which demand prompt action, designed for students and practitioners of medicine. By JOSEPH W. HOWE, M.D., Clin. Prof. Surg. Med. Dept. University, N. Y., etc. 2d Ed.: D. Appleton & Co., 1874.

FIGHTY-FIFTH ANNIVERSARY OF THE REGENTS' UNIVERSITY OF THE STATE OF N. Y., Albany, 1872.

A TREATISE ON PHARMACY, designed as a text-book for the student, and as a guide for the Physician and Pharmacist, etc. By EDWARD PARRISH, late Prof. Theory and Practice of Pharmacy in Phila. College of Pharmacy, etc. Fourth Ed. Enlarged and Revised by Thos. S. Wiegand, Graduate Coll. Phar. Phila.: H. C. Lea, 1874.

LECTURES ON THE DISEASES OF INFANCY AND CHILDHOOD. By CHAS. WEST, M.D., Fifth Amer. ed. Phila.: H. C. Lea, 1874.

CATALOUGE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, U. S. A. Supplement, vol. iii. Washington, 1374.

Original Communications.

USE OF WARM AND HOT WATER IN SURGERY.

By PROF. FRANK HASTINGS HAMILTON, M.D.,

NEW YORK.

In the January number for 1873, of the *Richmond and Louisville Medical Journal*, I have published a paper, originally read before the New York Reading-Room Association, on the subject of warm water in surgery, and which was summarized in The Medical Record. The paper includes an account of ten cases of surgical accidents and operations, treated mainly by submersion in warm or hot water, with allusion to many other minor examples treated in the same manner at St. Francis' Hospital, the Reception Hospitals, and Bellevue; all occurring under my immediate observation. The practice was first introduced (from the German hospitals) at St. Francis' Hospital of this city by my colleagues and predecessors, all German physicians. The results have proved so remarkable that I felt constrained to place them before the profession. I am now able to add several other cases, and although they include one in which death has resulted, yet my confidence in the plan has not diminished.

Case II.—*Traumatic gangrene arrested by hot-water submersion; spontaneous separation of foot and leg on the ninth day after submersion; recovery.*

Hugh Quigley, æt. 26; admitted to 99th Street Reception Hospital, Dec. 8, 1873, with a fracture of the right leg, caused by the fall of a heavy stone upon the leg about one hour before admission. The bones were broken near the junction of the lower and middle thirds. There was a slight laceration on the inside of the leg; the posterior tibial artery pulsated distinctly. Dr. Delgado, the house-surgeon, applied a roller and placed the limb in a box padded with oakum.

Dec. 9. A padded leather splint was applied to the outside of the leg and secured by a roller.

Dec. 10. 4.30 P.M., foot found to be cold, congested, and œdematous; pulse 130; splint and bandage removed, and limb wrapped in cotton batting, with hot bottles.

Dec. 11, I was summoned. There was then no sensation below the point of fracture; the pulsation of the posterior tibiæ had ceased; the leg was swollen and erysipelatous to a point some inches above the knee, and gangrene had extended in patches to about the middle of the leg.

It was apparent that the condition of the limb and of the patient were in the highest degree unfavorable for an amputation, which, in case it were made, must be above the knee. Surgeons need not be reminded how seldom an amputation at this period (intermediate), and under these circumstances, is successful.

Dr. Delgado, at my suggestion, made several incisions through the gangrenous tissues, and at once placed the limb in a water-bath at a temperature of about 110° Fahrenheit. No medicine.

Dec. 12. Pulse 112; temperature 103¼.

Dec. 13. Pulse 119; temperature 99¾.

Dec. 14. Pulse 114; temperature 101¼. Swelling of limb above the fracture increasing. Permanganate of potassa and chloride of zinc put in the water as disinfectants. Stomach rejects food; bowels are constipated; appetite poor. Bicarbonate of bismuth ℥i. ter die.

Dec. 15. Pulse 104; temperature 97¾. Vomiting has ceased. I saw him to-day for the first time since the limb was submerged. The water in the bath has been changed twice daily. The patient seems cheerful; says he sleeps very well, has no pain in the limb, nor is it particularly tender upon pressure above the line of gangrene. I cannot see that the gangrene has extended at all since the present treatment was adopted.

Dec. 16. Pulse 90; temperature 98.

Dec. 17. Pulse 96; temperature 99.

Dec. 19. The erysipelas has disappeared, and the line of demarcation is formed near the junction of the lower and middle portions of the leg. This is the eleventh day since the injury was received, and the eighth since submersion was employed. With my forceps and scissors I proceeded to trace the separation, and soon found that all the dead tissues were separated, except a portion of the gastrocnemius and soleus, which latter I divided with a knife, low down, and the limb fell off at the point of fracture; the incision of these muscles causing only a moderate hemorrhage from very small vessels. These I tied; neither anæsthetics nor the tourniquet were employed. The stump was then covered with warm-water dressings, supported by a snug roller.

Dec. 21. Pulse 92; temperature 100°. Leg again immersed in warm water.

Dec. 25. Limb removed from bath. Granulations abundant. Dec. 28. Balsam of Peru substituted for the water as a dressing. Dec. 30, a small abscess was opened which had formed near the knee; discharged about three ounces of pus. Jan. 24, 1874, I removed the projecting and exfoliated portion of the tibia with my fingers. Jan. 31. Patient sits up in his chair two hours daily, and the stump is closing rapidly. It is quite probable, however, that at some future time it will be necessary to resect portions of both the tibia and fibula, in order to give a proper shape to the stump. I have since made resection, and the stump is nearly well.

Case XII.—*Lacerated and contused wound of foot, with fracture of bones, caused by a car-wheel; gangrene and recovery.*—Bernard Monahan, æt. 45, admitted to 99th St. Reception Hospital, Jan. 11, 1874, with a compound fracture of the left foot, caused by its having been traversed by a street-car a short time previous to admission. The foot below the tarsus was much lacerated, and several of the bones were broken. The right foot was also slightly injured.

On the following day I was summoned to decide the question of amputation. It was determined to employ submersion, in the case of the left foot, with water at a temperature of 100° Fahrenheit. The right foot was enclosed in water-dressings and placed in bed.

Jan. 19. Left foot œdematous, but not tender or painful. The second and third phalanges of the second toe have dropped off.

Jan. 20. The second and third phalanges of the second toe dropped off. Patient ordered extras, as food and tonics. Foot taken from bath at night.

Jan. 31. Right foot is well; left foot granulating and cicatrizing; water-dressings discontinued and balsam of Peru substituted.

The condition of the pulse has been recorded each day, and at no time during the progress of the case has it exceeded 80 in the minute. There has been no fever.

Case XIII.—*Excision of head of metatarsal bone of great toe for valgus hallux.*—Adult male. St. Francis' Hospital.

Operation.—February 2, 1874. The patient having been placed under the influence of ether, Dr. Schar-

lau applied Esmarch's bandage from the toes to the middle of the leg. I then made a crucial incision over the lower portion of the metatarsal bone, rather upon its inner and dorsal aspect. In attempting to pass the chain-saw it was broken, and the section of the bone was made with the bone-cutter; in consequence of which the bone was divided irregularly. After disarticulation of the head the bursa was found to communicate with the joint, and the joint-surfaces were slightly carious. During the operation not one drop of blood appeared in the wound; but there was a slight oozing of *serum*, which required to be removed once or twice by the sponge. The ligature remained upon the leg about twenty minutes, and when it was removed, quite a free bleeding occurred; which was, however, promptly arrested by the application of carbolic-acid water—ten drops of the saturated solution to an ounce of water.

In order to avoid secondary hemorrhage the foot was treated with cool-water dressings until the following morning, when submersion in warm water was substituted, and this was continued about two weeks. One small abscess formed and opened upon the top of the foot, about two inches from the wound. In all other respects the progress of the recovery was uninterrupted. March 20, the wound was healed.

CASE XIV.—*Valgus hallux—Excision of head of metatarsal bone of great toe.*—Male, æt. 18, admitted to St. Francis' Hospital, Feb., 1874, with valgus hallux in both feet, which had existed several years.

The right foot troubled him most, the integument over the articulation being almost constantly inflamed. It was decided to practise excision only upon this foot.

Operation, Feb. 9, 1874, assisted by Drs. Rose and Scharlau.—The patient was anæsthetized and Esmarch's bandage applied. The incisions were the same as in the preceding case; but the section of the bone was made with the chain-saw. No blood appeared in the wound until the Esmarch band was removed. The blood then flowed quite freely, but in a few minutes it ceased *spontaneously*, the total amount of blood lost not exceeding two or three ounces.

The wound was treated with cool-water dressings until the following morning, when the warm-water bath was substituted. The bath was used about fourteen days, and warm-water fomentations were then substituted. March 20, the wound was closed and patient was walking about, the progress of the case toward recovery having been from the first uninterrupted.

CASE XV.—*Lacerated wound of hand—Submersion on the seventh day—Death on the thirteenth day.*—Andrew Bedhman, æt. 27, admitted to Bellevue Hospital, Dr. Wood's service, Jan. 12, 1874. His left hand had been caught in a "moulding machine" a few hours before admission, and was "terribly lacerated—in short, all torn to pieces." By advice of Dr. Wood, the acting house-surgeon proceeded at once to amputate the first and third fingers, through the middle of the metacarpal bones, and the second finger at the second joint. Only one or two vessels required the ligature. The hand was then laid upon a splint and dressed with carbolic-acid solution and lint.

Jan. 16th. A consultation was called by Dr. Wood, at which I was present. Hand greatly swollen and wounds gaping, foul, and gangrenous; redness and swelling extending above the wrist; pulse, in the morning of this day, 100; in the afternoon, 120; temperature, 106; respiration, 20; patient very despondent. The period and condition seemed peculiarly unfavorable for amputation, and it was decided to employ warm-water submersion. We subsequently learned that no bath could be obtained until the 19th. On this day (16th) he took quin. sulph. gr. x. at 6 and 9 P.M., also tr. aconite, Fleming, ℥ij., at 6, 7, 8 and 9 P.M.

On the 18th he had a slight chill.

Jan. 19th. "Hand begins to look a little better; some healthy discharge;" but most of the wound is "still foul and offensive." House-surgeon ordered sodæ sulphitis, gr. xv., and quin. sulph. gr. v. ter in die.

Jan. 20th. Some improvement in the appearance of the granulations; pain in shoulder.

Jan. 22d. Opening made above the wrist to let out pus. 23d. Explored again for pus, but none found. 24th. For the first time the submersion has been continued all night.

Jan. 25th. At 5 P.M. the night watchman, in making his rounds, discovered that the hand was bleeding, "which was arrested by the orderly before the acting house-surgeon could arrive (which was in two minutes). Patient had lost very little blood (water in bath hardly tinged), but was terribly frightened." He was informed that he had lost very little blood, but from this moment he failed rapidly and died about three hours later.

Remarks.—The records of the autopsy cannot be found, but it is understood that there was no evidence of pyæmic infection. The period at which submersion was commenced—the sixth day—renders it apparent that the water treatment had little or no responsibility for the final result. It is my opinion, founded upon my experience in similar cases, that submersion, practised fron the first or second day after the accident, would have saved his life.

The following is the record of temperature and heart's action from and after the fourth day:

Jan. 16th. (Day of consultation) P.M. Temperature 106°; pulse 120.

Jan. 17th. (Fomentations commenced) P.M. Temperature 106¼°; pulse 108.

Jan. 18th. (Slight chill.)

Jan. 19th. (Submersion commenced to-day) P.M. Temperature 102¼°; pulse 108.

Jan. 20th. Temperature 103¼°; pulse 112.

Jan. 21st. Temperature 106°; pulse 112.

Jan. 22d. (Incised for pus.) Temperature 103°; pulse 112.

Jan. 23d. (Explored for pus, none found.) Temperature 100¼°; pulse 112.

Jan. 24th. (In bath all night.)

Jan. 25th. Died at 8.20 A.M.

CASE XVI.—*Large bursa of wrist—Incision and submersion—Results negative.*—A blacksmith presented himself at my office with a very large bursa on the back of his hand and forearm—probably seven inches in length by three in breadth, and by which he was completely disabled.

In February of this year I opened the bursa at two points (at Bellevue Hospital) and had the arm at once submerged in warm water. The openings did not prove to be sufficiently free to allow of easy ingress and egress of water, and the consequence was that when suppuration took place the matter made an exit at two or three other points; but at no time was the inflammatory reaction violent.

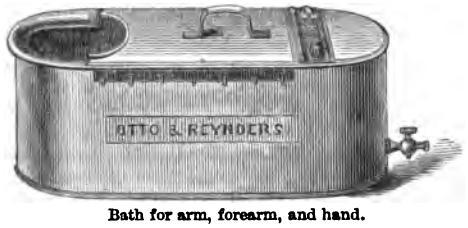
March 25th. The wounds are nearly closed, and it is apparent that a cure may be promised. In order to compare the results in this case with other similar cases, I will mention that about the same time a similar bursa of the arm was opened by one of my colleagues at Bellevue, and treated by injection of

tinct. of iodine. A very smart inflammatory reaction resulted, with suppuration, and several openings formed for the discharge of pus. . . . . A few days since a patient was brought to me by Dr. Cox, of Harlem, with a similar bursa, which had opened spontaneously at various points, and was accompanied with purulent infiltrations between the metacarpal bones.

Remarks.—On the whole, I am satisfied that of these three examples the case treated by submersion did the best, yet the value of this plan can only be demonstrated when the water has perfectly free ingress and egress. In a like case I would hereafter lay open the whole length of the bursa.

Method of Using the Warm-Water Bath.

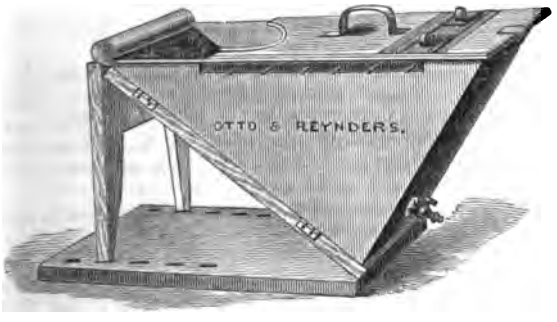
For the arm and hand we have an oblong zinc bath, 23 inches long by 8 inches wide and 8 in depth, with somewhat flaring margins where the arm is to enter, supplied with a movable cover, which leaves an opening for the arm, and provided with a stop-cock to enable us to draw off and renew the water. Along



Bath for arm, forearm, and hand.

the upper and outer margin of the bath are arranged small wire-pins, upon which pieces of cloth may be fastened for the purpose of suspending the limb. Care must be taken not to allow the limb to rest against the edge of the bath, so as to interfere with the circulation, and it must be carefully adjusted upon a shelf, beside the bed, in such a position as will be most comfortable to the patient.

For the lower extremity a zinc bath is used also, somewhat larger, the floor being in the form of an inverted roof, the apex of which is below; the base being represented by the open top of the bath; this latter is provided also with a movable cover. The



apex is supported by a wooden frame and horizontal board. This bath is, like the arm-bath, provided with pins for suspension of the limb, and a stop-cock.

In the case of the foot-bath, when it is found uncomfortable to project the foot from the side of the bed, the portion of the bed upon which the body reposes is elevated by mattresses, and the bath is placed on the floor of the bedstead.

We have not thought it necessary to keep the water at an absolutely uniform temperature, so that its management is left very much to the judgment of the patient or of his attendant; but usually it has been kept at such a temperature as to feel warm to the hand of the attendant—and this is found to be about 95° Fahrenheit. Sufficient uniformity has been attained generally by changing the water three times daily.

In case of a recent wound, where secondary hemorrhage is at all liable to occur, the limb is dressed for a few hours with either warm or cold fomentations, and is left reposing in bed; but neither sutures, adhesive plasters, nor bandages are applied. At the expiration of this time either the bath or the warm-water fomentations are commenced, and thereafter employed systematically. The patient is at liberty at any time to lift the limb from the bath, and he generally does this pretty often, to see how it is progressing.

The baths in use by us are constructed by Otto & Reynders, surgical instrument-makers, No. 64 Chatham street.

In using the fomentations we envelop the wound and limb in several folds of sheet lint or soft old muslin, saturated with warm water, the whole being enclosed in oiled silk or vulcanized rubber. This is changed about once in four or six hours.

SUMMARY OF CONCLUSIONS.

Effect of Submersion in Warm and Hot Water.

No treatment hitherto adopted, under our observation, has been attended with equally favorable results.

Under this plan the area of acute inflammation is exceedingly limited; erysipelatous inflammation has been almost uniformly arrested or restrained, when it has actually commenced, and it has never originated after submersion; gangrene has in no instance extended beyond the parts originally injured, and when progressing it has in most cases been speedily arrested (in gangrene hot water, or water at a temperature of from 100° to 110° Fahrenheit, is to be preferred). Septicæmia and pyæmia have not ensued in any case in which submersion has been practised from the first day of the accident. Purulent infiltrations and consecutive abscesses have been infrequent, and always limited to the neighborhood of the parts injured, and of small extent. Traumatic fever, usually present after grave accidents, when other plans of treatment have been pursued, as early as the third or fourth day, has seldom been present when this plan has been adopted, and in no case has the fever been intense or alarming.

The phenomena usually observed in cases of recent lacerated or incised wounds, when submerged, are, a sense of comfort, yet not absolute relief from pain; on the second or third day the parts adjacent are swollen, but not much reddened; the integument generally assumes a white and sodden appearance, and with only slight tenderness. On the fifth, sixth, or seventh day the swelling is greater than usually accompanies other plans of treatment; and, with the inexperienced, is likely to excite alarm, but it is found not to be attended with increased tenderness, and it pits under pressure, showing that it is a condition of œdema chiefly. At this time the granulations are generally covered with lymph, or some exudate of a whitish color, and which might easily be mistaken for a diphtheritic deposit. At the end of fourteen days, or thereabouts (the period at which, in most cases, we substitute fomentation for submersion), the limb is still œdematous, the granulations are abundant, sometimes presenting a fresh, red appearance, and at others covered with the white exudate.

Effects Ensuing from the Substitution of Fomentation for Submersion.

Pursuing the clinical history of these cases, we find that after fomentations are commenced, the œdema gradually lessens, but its final disappearance is delayed sometimes to a period beyond the complete cicatrization, so that the cicatrix, not unfrequently, is considerably depressed below the level of the sound parts; and we have seen this condition of the parts continue for many months. We observe, also, that the granulations are red and abundant, and that cicatrization progresses as rapidly as under any other plan of treatment; indeed, we are inclined to think that it progresses more rapidly than we are accustomed to see where other plans, considered appropriate, have been adopted. We speak especially of the vigorous appearance of the granulations, and of the cicatrization, because our opinion was, before observing these cases, that warm-water fomentations and warm baths would render granulations weak, pale, and sodden, and retard cicatrization. If such effects have resulted, they must have been presented as rare exceptions, since we have not observed them.

After Erysipelas has actually Commenced.

We have had very few opportunities of testing warm-water submersion *after erysipelas has actually invaded a limb*, since at St. Francis', where most of these observations have been made, erysipelas is generally *prevented;* but in two or three examples, imperfectly managed, at Bellevue Hospital, the results have at least furnished no testimony which would deter us from a further trial. In explanation of this latter statement, relating to Bellevue Hospital, it is necessary to say that, with one exception, the bathing-tubs employed were improvised and were imperfect, the amount of attendance during the night is too limited to insure faithful attention to the temperature of the water, the heat of the wards is greatly lowered, and none of the nurses have experience in the management of the baths.

Value of Hot Water in Traumatic Gangrene.

The power of hot-water baths, or water at or above the normal temperature of the blood, to arrest traumatic gangrene is remarkable; and the writer entertains a hope that its efficiency may not be limited to *traumatic* gangrene alone, yet this remains to be proven.

To what Class of Cases Submersion is especially Applicable.

Position of injury.—The lower extremities can only be completely and permanently submerged to a point three or four inches below the knee, and the upper extremities to a point a few inches above the elbow; consequently, submersion is limited to those portions of the extremities which are below the points mentioned.

Character of injury.—Submersion in warm water demonstrates its superiority over other plans, especially in the case of a laceration or contusion of the hand or of the foot, when the integument and flesh are extensively torn—provided the limb is submerged without closing the wound—that is, without sutures or bandages; indeed, sutures are inadmissible when this plan is adopted, since the œdema which almost inevitably ensues would break away the sutures.

Mere contusions, without external lesions, have been treated almost constantly at St. Francis' by this method; and the results have been in all cases satisfactory, and occasionally they have progressed toward recovery in a manner to excite surprise.

Simple incised wounds have seldom been subjected to immersion, since it inevitably defeats union by first intention. Nor have wounds caused by *amputation* been treated in this manner, partly for the reason just given, and partly because of certain apprehensions that the depending position might expose the patient to the dangers of a secondary hemorrhage where large arteries have been severed and are exposed in the wound.

Warm-water fomentations are regarded by us as always second in value to submersion in the prevention and cure of inflammation, and they are reserved, therefore, for those examples in which submersion for one or another of the reasons already given, cannot properly be employed.

Fomentations are employed by us after about the fourteenth day in all those cases in which we employ submersion at first—occasionally, when the patient is weary of the confinement of the bath, the limb is taken out and fomented during the night.

We employ fomentations in amputations and other incised wounds when union by first intent is desired; in lacerated and contused wounds which cannot be subjected to immersion; in most examples of old ulcers; in many syphilitic and cancerous sores; in some simple contusions and sprains. In short, to repeat what has been already intimated, with warm water, either in the form of the bath or fomentation, we treat nearly all surgical accidents. Carbolic acid, the chlorinate of soda or lime, and other antiseptics being reserved for very rare and exceptional cases. Unguents and poultices are almost unknown at St. Francis'.

THE USE AND COMPARATIVE MERITS OF THE BICHLORIDE OF METHYLENE AS AN ANÆSTHETIC.

By BENJ. F. DAWSON, M.D., Etc.,

NEW YORK.

(Read before the New York Medical Library and Journal Association, April 17th, 1874.)

While in London during June, 1872, I had the pleasure of being invited by Mr. T. Spencer Wells to assist him in a case of ovariotomy, in which he wished to test the merits of my clamp for the pedicle.

Aside from the great skill of this distinguished surgeon, I was much attracted by the appearance and behavior of the patient under the anæsthetic, as well as by the manner in which the latter was administered. In appearance the patient seemed to be in a natural sleep; neither her color nor respiration indicating that she was in a state of unnatural unconsciousness.

At the conclusion of the operation I was still more surprised to see how rapidly she recovered consciousness, not more than two minutes elapsing from the painless introduction of the last stitch and complete consciousness, shown by her opening her eyes and addressing Mr. Wells. There was no complaint of either nausea or headache.

On inquiry, Mr. Wells informed me that the anæsthetic used was the bichloride of methylene, or chloromethyl, as it is commonly called, and that he had used it for some time in preference to all other anæsthetics, for the reasons I will hereafter mention.

On my return home I brought with me a supply of chloromethyl, and the apparatus by which it is gener-

ally administered, and for the past two years I have used it, for myself and others, in both brief and prolonged operations.

The composition of bichloride of methylene is CH_2 CL_2. It is a clear liquid, with an odor somewhat sweeter than chloroform, boils at 88° Fahrenheit—54° lower than that required by chloroform—contains one atom more of hydrogen and one less of chlorine than the latter.

It resembles ether in being inflammable in air, but is more volatile, of more agreeable odor, and less irritating to the air-passages.

Chloromethyl was introduced, as a general anæsthetic, in 1867, by Dr. B. W. Richardson, of London, who administered it for the first time in October of that year, in a case of ovariotomy performed by Mr. Wells, having previously subjected himself to its effects.

Since 1867 it has been extensively used in many of the largest hospitals of Europe, as well as in the practice of many English surgeons, by many of whom, notably Mr. Wells, it is considered superior to all other anæsthetic agents, with the exception that it is very expensive, from the fact that it is difficult to make it well, and still more difficult to preserve, owing to its liability to deterioration by exposure to light and air.

Like chloroform and sulphuric ether, it may be administered on a handkerchief or towel, or with any of the inhalers in general use; but from the peculiarity of being impaired by light and air, and its great volatility, it is best administered by such means as will guard against its being thus affected. Several apparatuses have been devised to accomplish this end, but none have been so generally endorsed as that known as Dr. Junkers', and which is the one preferred by Mr. Wells. Administered by this apparatus, a patient may be kept in a state of perfect unconsciousness throughout a prolonged operation; scarcely any of the vapor escapes into the room; neither the surgeon nor the assistants are affected by it; the light is excluded from the chloromethyl, and the quantity inspired by the patient is wholly within control of the one administering the anæsthetic.

The effects of bichloride of methylene are very similar to those of chloroform, but anæsthesia seems to be much more readily induced by it, and is decidedly more easily recovered from. In fact, its action seems to combine the best properties of chloroform and ether. According to Mr. P. Marshall,* who reported the use of it in five cases before the Medical Society of London, in 1867, the time required to put the patient under its complete influence was from 3½ to 7 min., and the quantity used from 2 to 7 drachms.

In 123 cases in which it was given by Mr. Richard Rendal,† the ages varying from 6 months to 70 years, anæsthesia was produced in 30 seconds in 18 cases; in 60 seconds in 70; in 2 minutes in 25; in 3 minutes in 5; in 5 min. in 3; in 9 min. in 2. Of these 123 cases 50 recovered in 1 min.; 23 recovered in 2 min.; 9 recovered in 3 min.; 28 recovered in 5 min.; 11 recovered in 10 min.

In my own experience, as shown by the records of cases, anæsthesia was invariably induced within 2 min., the longest being 8 min.—one case which had previously resisted taking ether. Recovery was correspondingly quick.

Its effects being much more rapid, from its great volatility, than those of chloroform, anæsthesia is also induced much more quietly, there being, according to the testimony of those who have used it extensively, a marked absence of mental and muscular excitement or rigidity.

Its effects upon the pulse are, at the outset, to decidedly stimulate and strengthen it; but it soon returns to about its normal state, and never in my experience, as will be shown further on, has fallen much below its normal rapidity or strength. This statement is also supported by the testimony of Mr. Richard Rendal,* who attributes its safety to this stimulating action on the heart, and its rapid elimination, as shown by the rapidity with which patients recover from its effects.

Its effects upon the pulse in the five cases reported by Mr. Marshall, already referred to, were as follows: In three it ranged from 65 to 80; others offered a marked contrast, for in them it ranged from 114 to 120.

In 15 cases of my own, of which a record of the pulse was noted, the following was the lowest the pulse ranged: In three, 75; in five, 80; in three, 84; in two, 88; in one, 96; in one, 98.

Its effects upon the respiration are similar to chloroform. In no case have I seen other than full and quiet inspiration and expiration, and that these functions are properly performed is attested by the generally unaltered color of the skin and lips, which are also in some cases increased to a clear scarlet. This testimony is also supported by that of others, especially Mr. Wells,† who has used it more than 350 times, and who writes: "The patient very seldom becomes pale, sleeps quietly, awakes quietly, and seldom has much bronchial irritation."

The nausea usually following recovery from ether and chloroform is of much less frequency and severity after chloromethyl. In regard to this point Spencer Wells also says: "It is quite true that it has the disadvantage of causing nausea and occasional sickness, but in my experience this is almost always the rule with chloroform, whereas with chloromethyl it is *certainly exceptional.*" Mr. Rendal also states that "no sickness or headache follow unless the inhalation has been continued, or a second anæsthetic given to keep up the effects."‡ In his 123 cases, already referred to, vomiting occurred in 15 only: 1 in 8—but in all of these latter it had been continued some time, and some had just been eating. In my own experience, in 31 cases in which I have administered it, nausea or vomiting ensued in but 6, in which latter it was administered for from 20 minutes to one hour, and for severe operations. I have never seen either nausea or headache ensue when it was administered for less than 10 minutes. And Dr. Thomas Bird, of Guy's Hospital, London, writing to me a few weeks ago, says: "As to nauseating effects, if the administration is PROLONGED, the effects are the same as with chloroform, except that *the sickness is not so prolonged.*"

As to the question whether chloromethyl is less dangerous than chloroform, or as safe as sulphuric ether, there is some uncertainty.

Mr. Rendal, in his article already referred to, says: "As regards safety, I may add that I have not had a fatal case." And Mr. Wells likewise writes that in over 350 cases in which chloromethyl had been administered for him by Drs. Richardson, Junker, and Day, "in very few of these operations was the insensibility to pain maintained for less than 5 minutes—in a few it was kept up from 45 min. for an hour or more—yet I have never been at all uneasy during the administration or from any subsequent effects fairly referable to it, whereas with chloroform I never felt quite at ease; and although I have never

* Brit. Med. Journal, Dec. 7, 1867.
† Brit. Med. Journal, Oct. 16, 1869.

* British Med. Journal, Oct. 16, 1869, page 413.
† Diseases of the Ovaries, page 335.
‡ Loc. cit.

lost a patient during operation, I have three times had to resort to artificial respiration, and I have very often seen patients suffer so much from *chloroform vomiting*, that the result has been imperilled, and in some cases a fatal result has been in a great measure due to this vomiting. When I add that between April, 1870, and March, 1871, I had 32 successive cases of ovariotomy in private practice, without one death, and that the last 24 cases of the fifth hundred, including both hospital and private cases, all did well—every patient having recovered—it must be admitted (as anæsthesia was complete in every case, not one patient having been conscious at any stage of the operation) that the anæsthetic is a good one."

In the 31 cases in which I have administered it, 5 being cases of ovariotomy, and 10 prolonged and severe uterine operations, I have never seen a symptom that made me feel uneasy, and none that so often seem alarming in using chloroform. Indeed, so safe do I consider chloromethyl, when it is carefully given, that I have not hesitated to let others administer in my operations, whom I considered competent to judge of its effects, and Dr. P. B. Porter, who has given it for me eight times, as well as Drs. John C. Jay and F. H. Rankin, have had opportunity to watch its reliable action and evident greater safety over chloroform.

Death, however, has occurred during its administration, and, on looking through the literature of the subject, I have been able to find six cases recorded: In three of these the post-mortems show a large flabby heart; but though it may be proven to be more immediately dangerous than ether, yet the question can plausibly be asked, That if ether has not killed by its immediate anæsthetic effects, how many fatal results *after* operations have been due to its after-effects?

Statistics kindly sent me by my friend Dr. Bird, of Guy's Hospital, give the following as the comparative death-rate of the anæsthetics now used:

Ether, 1 death in	23,000
" and chloroform combined, 1 death in	5,000
Bichloride of methylene, 1 death in	5,000
Chloroform, 0 "	3,000

Having briefly stated the effects and apparent advantages of the chloromethyl, I will briefly report a few of the most prolonged cases of the 31 of anæsthesia induced with it by myself, and thus show all the advantages claimed for it.

Case I.—Oct. 24th, 1871, I was asked to administer it by Dr. Emil Noeggerath, at the German Hospital, in a case of ovariotomy. Pulse rose at first to 100, but soon fell to 80, at which it continued strong during the *hour and a half* occupied by the operation. Respiration and color natural; but *one ounce* of methylene used. Anæsthesia was induced in 3 minutes, and recovered from in 12, the duration of the latter being due to her exhaustion from the great amount of blood lost.

Case II.—October 30th, 1871, was again requested by Dr. Noeggerath to give chloromethyl in a case of ovariotomy at the German Hospital. Anæsthesia complete in 2 minutes. Pulse, 105 at first, fell to 84, and continued at that rate, with but slight variations, quite strong. Respiration and color natural; recovery in 3 minutes; no nausea until evening, when vomiting occurred, as had been the case for 2 or 3 days before the operation, as is recorded in Dr. Noeggerath's report of the case to the Obstetrical Society.* Operation lasted three-quarters of an hour. ʒ v. methylene used.

Case III.—Oct. 31st, 1871, gave methylene for Dr. Noeggerath, at German Hospital, in case of ovariocentesis vaginalis. Anæsthesia induced in 3 minutes. Pulse at outset rose to 95, but soon fell to 80, and continued strong at that rate during the operation, which lasted 20 minutes. Respiration and color normal. Recovered in less than 2¼ minutes. No nausea or headache. ʒ iiiss. methylene used.

(These three cases will be found in the Transactions of the New York Obstetrical Society, reported in the *American Journal of Obstetrics* for Nov., 1872, and were witnessed by a number of our distinguished physicians.)

Case IV.—Nov. 12th, 1872, was requested by Dr. T. A. Emmet to give methylene to a patient in the State Woman's Hospital, on whom he was to operate for vesico-vaginal fistula, and who had been exceedingly troublesome in previous attempts at anæsthesia. Was fully anæsthetized in 4½ minutes; made no resistance whatever. Pulse, 105 at first, soon fell to 80, at which it remained strong during the half hour occupied by the operation. Became conscious in less than 2 minutes; no nausea. When asked by Dr. Emmet how she felt, said "finely." But ʒ iij. of methylene used. Color and respiration natural.

Case V.—Nov. 17th, 1872, was requested by Dr. Sims to give methylene to a lady on whom he was to operate for carcinoma uteri. Pulse rose at first to 112, but soon fell to 99 and 96, at which it remained during the hour and a quarter occupied by the operation. Was greatly excited at first, but soon breathed freely, and in 6 minutes was fully anæsthetized. Respiration and color natural. Lost considerable blood; recovered fully in 4 minutes. Some nausea, but nothing vomited. ʒ i. methylene used.

Case VI.—Nov. 20th, 1872, was again invited by Dr. Sims to give methylene to a case he was to operate on for vaginismus. Patient greatly excited and nervous, breathed badly at first. Pulse, 105 at outset, fell in a few minutes to 80, anæsthesia complete in 5½ minutes. Operation lasted 45 minutes; recovered consciousness in 3 minutes; some nausea and slight vomiting. ʒ vij. methylene used.

Case VII.—Nov. 23d, was invited by Dr. Sims to give methylene in a case of amputation of the cervix uteri. Pulse at outset 95, fell to 75, and continued at that rate; anæsthetized in 3 minutes. Color unusually bright and respiration free and full. Operation lasted 50 minutes; recovered consciousness in 2 minutes; very slight retching. ʒ iv. methylene used.

Case VIII.—Nov. 3, 1873, gave chloromethyl to a patient on whom I was to operate for fissure of cervix uteri. Took it well, and in 4 minutes was perfectly anæsthetized. Pulse at first 100, fell to 85, at which it remained strong during the 45 minutes of operation. Respiration and color good. Came out of effects in 3 minutes; no nausea. ʒ vij. used.

Beside the above typical cases, which I have selected as those in which the chloromethyl was given for the longest time, I have also the records of others equally convincing as to the advantages of this anæsthetic. I have given it also for Dr. T. G. Thomas in ovariotomy, for Kammerer, Janvrin, and Hanks in other cases, and I am sure they will agree as to its apparent advantages.

The conclusions to be deduced from the foregoing remarks as to this anæsthetic are the following:

It is pleasanter than ether and chloroform in odor.

It is much more rapid in its effects than any other anæsthetic.

It induces no muscular excitement.

Recovery is more rapid and complete than from ether or chloroform.

* Am. Journal of Obstetrics, etc., Nov., 1872.

Nausea and vomiting are rarely induced by it.

Its effect upon the circulation is not so depressing as chloroform, and respiration is much more regular and free.

Like chloroform, its effects are obtained with a small amount, hence it is much more portable.

In fact, I can offer no better praise of its advantages than that by Spencer Wells, who says: "Indeed, the patient has all the advantages of complete anæsthesia, with fewer drawbacks than I have ever obtained by the use of any other anæsthetics."

PERITYPHLITIS—OPERATION — RECOVERY.

By SAMUEL WHITALL, M.D.,

NEW YORK.

On the morning of December 31, 1873, I was called to see Simon H., a boy 8 years of age. He had enjoyed good health until the day preceding my visit, when, about 4 o'clock P.M., he began to vomit, and this symptom continued at intervals during the night. He did not complain of any pain. Considering the indisposition due to gastro-intestinal irritation, caused by an over-indulgence in the luxuries of the holidays, I prescribed a cathartic of calomel and rhubarb, and enjoined a light diet and rest. The following day (Jan. 1, 1874), although in some respects improved, the patient complained of pain in the right leg and lower portion of the abdomen on the right side. Upon examination I found tenderness on pressure, extending from the right iliac fossa to the inner side of the right thigh, near the junction of the middle with the upper third. The absence of tumefaction, of continuous vomiting, and of any markedly localized tenderness, with the open condition of the bowels, inclined me to hope that the symptoms of which the patient complained were muscular in origin, and would yield to rest and anodyne applications.

I did not see the case again until the 7th, when I was called to his sister, who was taken sick in much the same manner as her brother had been, and whose ailment was relieved by a similar course of treatment. During this visit the mother called my attention again to Simon, remarking that he was not doing at all well. Since my last visit his appetite had been generally fair, his bowels not obstinately confined, and urination normal. He, however, complained of pain in the right leg, and could not walk without limping. On the night of the 5th he had vomited three times. He suffered most when touched, or when he attempted to walk.

Upon seeing the child I was struck with the rapid emaciation that had occurred and the anxious expression of countenance. He could not put the right foot to the floor without pain, but stood with the limb slightly flexed and adducted. The pulse was slow but feeble, and the tongue coated with a dirty brownish fur. The pain was now more markedly located in the right iliac region, and there was also great tenderness on pressure. A circumscribed induration could be distinctly felt to the outer side of the caput coli and extending upward a short distance along the outer border of the colon. There had been no vomiting since the 5th; the bowels were sluggish, and there had been loss of appetite for two or three days. My suspicions were now more strongly aroused that I had to deal with a case of perityphlitis. Hoping, however, rather than believing, that the tumefaction might in greater measure, if not entirely, be due to impaction of fæces, I determined to give a large dose of castor-oil, the operation of which was to be followed by the administration of morphine to the point of producing gentle narcotism. Fluid food ordered; absolute rest enjoined.

8th. The oil operated freely, but without producing any appreciable change in the condition of the parts; the general condition of the patient was, however, more comfortable. The mother thought she noticed a fæcal odor in the eructations which occurred during the morning.

10th. No marked improvement since last note. Very little pain when the patient remains quiet, but there is marked tenderness on pressure over the seat of induration, and during the pressure the patient complains of a heavy feeling in the sole of the right foot. Bowels regular, appetite fair, tongue heavily coated. No fluctuation could be detected by careful palpation, nor by rectal touch, neither was there any discoloration or tension of the skin.

Being satisfied that the case was one of perityphlitis, with possible perforation of the appendix vermiformis, I determined to resort to the precautionary operation proposed by Dr. Willard Parker in 1865.

In compliance with my request for consultation, Dr. Herzog was called to see the boy on the 11th. This gentleman confirmed the diagnosis and indorsed the proposed operation. As, however, there appeared to be no immediate danger, we were united in postponing surgical interference until the following day.

12th. Upon consultation, the patient being in about the same condition, it was decided to cut down upon the tumor as proposed.

After the patient was brought under the influence of chloroform by Dr. Herzog—Drs. Hagar, Oberndorfer, and Bermingham being present—I made an incision in the right iliac region, extending from a point about an inch above and within the anterior superior spine of the ilium, downward and inward, toward the symphysis pubis, and parallel with Poupart's ligament. The length of the cut was three inches. The fascia transversalis was exposed by careful dissection, and found to be healthy in appearance, as were also the tissues above it. A careful digital examination revealed a hard immovable tumor, the size of a small orange, immediately beneath the fascia transversalis, with a prolongation extending upward, as previously ascertained. No fluctuation could be felt, nor did any pus escape upon the introduction of an exploring-needle deeply into the mass. In the circumstances, it was deemed advisable not to open the fascia. The upper third of the incision was closed by interrupted sutures, and the remainder of the wound dressed from the bottom with lint. Flax-seed poultice applied.

5 P.M. The patient, four hours after the operation, quite comfortable.

13th. Passed a quiet night; complained of pain at intervals. Pulse, 102; temperature, 99½° F.; tongue heavily coated; considerable pain and tenderness in affected parts; appetite fair, slight nausea, but no vomiting.

14th. Less pain and tenderness; general condition improving. Pulse, 96; temp., 99½° F. Ordered an enema of warm water.

15th. For the past two or three nights, slight perspiration; suppuration moderate, but pus foul-smelling. No movement from bowels, enema to be repeated. Pulse, 102; temp., 99½° F.

16th. Tongue cleaning, patient free from pain; had a slight evacuation from enema. Pulse, 90; temp., 99½° F.

18th. Marked improvement. Pulse, 66; tongue nearly

clean; has had a free movement of the bowels from a dose of castor-oil. The discharge from the wound has been quite profuse for the past two days, but the pus is much less offensive than at first. A careful digital examination of the bottom of the wound, made from day to day, has failed to reveal any fluctuation, though the induration has been gradually subsiding. Very little tumefaction can now be felt.

22d. Patient improving rapidly, wound granulating nicely, water-dressing applied.

27th. The patient can move the right leg freely without causing pain; the wound has nearly healed; no tumor can be felt, nor is there any tenderness, except along the line of the incision.

Feb. 17th. Patient called at my office in a state of perfect health, and has gained rapidly in flesh; he can walk without difficulty, and upon examining the parts not the slightest induration can be felt, and the wound has entirely cicatrized.

Although the mildness of the attack in the beginning warranted the belief that a favorable issue might be expected without surgical interference, and although the sequel tends to strengthen this belief, the history of the above case, in the judgment of the writer, shows at once the advantages and the safety of an operation.

In aggravated cases, in which are present all the physical and rational signs of suppuration, there can be no question as to the propriety of a free incision. The physician who would permit a patient in such circumstances to die without evacuating the pus, would be justly condemned. In those cases, on the contrary, in which there appears to be no urgent need of operating, and in which the prognosis seems to be favorable, it is natural that one should hesitate before endeavoring to assist nature by the aid of the scalpel. This hesitation receives strength from the fact that many cases terminate favorably either in resolution, or by a discharge of the contents of the abscess through some safe channel—through the bowels, the bladder, or the integument.

It is evident that physicians generally are slow to interfere in doubtful cases, for, since Dr. Parker* proposed and successfully performed this operation, few have followed in his footsteps. Scarcely a patient a year has been thus rescued, yet during an equal period, how many lives have been lost by this fatal malady!

Dr. Parker's arguments in favor of operative interference are so clear and so convincing, that it is surprising that any one should refuse to resort to it, or should wish to substitute therefor the tortures of Vienna paste, or the uncertainty and tediousness of aspiration. Could we clearly differentiate the cases which end in resolution from those which go on to the formation of pus; could we ascertain the exact time when suppuration would occur and with equal certainty discover the point of first formation, and then watch from moment to moment the invasion of surrounding parts, we might with safety wait for the critical period to arrive, and with a free and bold incision rescue our patient from impending death. Again, notwithstanding the imminent danger to which the patient is exposed, could it be shown that the proposed operation is *per se* hazardous, hesitation would be justifiable. The truth of Parker's proposition is confirmed, however, by two incontrovertible facts—the great fatality of perityphlitic abscesses on the one hand, and on the other the safety of the operation.

In the present instance I am far from sure that the operation saved the patient's life; indeed, it is very probable that he would have recovered had no operation been performed. I am more convinced of this by doubts as to whether the indurated mass did not in great measure, if not entirely, disappear by resolution. The pus, although for a couple of days quite offensive, was not discharged in such quantity as one would expect from the breaking down of such a mass. I considered the operation advisable, notwithstanding the absence of any threatening symptoms, for the simple reason that it would be harmless if it should do no good; whereas, without it, a fatal perforation might at any moment occur.

Although I am thus in doubt whether the patient would have survived or not without an operation, I feel quite positive that the incision relieved his pain, improved his general condition, and greatly accelerated his convalescence, while it in no way jeopardized his life.

The favorable termination of this case, and of the one operated on by Dr. Weber,* without disturbing the fascia transversalis, opens the question whether it is better to incise the tumor before evidences of pus are discovered. Dr. Parker has, I believe, in every instance cut into the tumor at once, but the above cases prove that such a course is not always necessary. The fact also that most of the abscesses point externally† tends to confirm this view. The incision through the tissues above the fascia greatly relieves the tension, and invites the pus—if I may use the expression—to pass out through an open door. On the other hand, by cutting through the fascia too soon the peritoneal cavity is more likely to be opened before adhesions have occurred. The danger of hernia, as pointed out by Dr. Weber (op. cit.), should also be taken into consideration in deciding the question.

It may be argued that the aspirator does away with the necessity of any incision prior, at least, to the formation of pus, as frequent puncture by this instrument will enable the surgeon to ascertain the precise time when suppuration occurs. When we reflect that matter may begin to form at any point of the indurated mass, and at any moment, we see how frequent and how numerous the punctures must be to insure safety. Few patients would submit to such experimentation. But there is nothing gained by aspiration in cases where suppuration occurs, for in these an incision must eventually be made, and the sooner it is done the better after the first five days (Parker). In the exceptional cases which end in resolution, the aspirator has no advantages over the knife, as the frequent applications necessary would render it equally, if not more, dangerous, while it would not, like the knife, mitigate pain by relieving the tension. The knife, therefore, has the advantage of placing the patient in a condition of safety, without any risk to his life.

In conclusion, I feel warranted in stating, as far as the experience of a single case will admit, that in perityphlitis, where there is any doubt that it will run a favorable course, it is not only justifiable but advisable, at the proper time, to cut down as far at least as the fascia transversalis. If, upon reaching this point, any evidences of pus are found, or if there be great tension, the tumor should be freely incised. If, on the contrary, the tumor be small and circumscribed, and there be no signs of pus, it will be safe to leave the fascia transversalis intact, and watch for an opportunity to lay open the abscess should occasion require.

* Medical Record, March 1, 1867, page 25.

* N. Y. Med. Journ., Aug. 1871.

† W. T. Bull, M.D., N. Y. Med. Jour., Sept. 1873, p. 248.

Before resorting to surgical interference every other means should, of course, be taken to arrest the morbid process.

607 LEXINGTON AV.

PARALYSIS OF THE HAND AND FOREARM CAUSED BY ESMARCH'S BLOODLESS METHOD.

BY ROBERT F. WEIR, M.D.,

Surgeon to the Roosevelt and St. Luke's Hospital, New York.

SINCE giving in the RECORD for February 2, a brief account of the results of Esmarch's bloodless operations, a further experience has not only confirmed its usefulness, but also has brought into view a disadvantage which fortunately, however, can easily be obviated.

The occurrence of paralysis, from the pressure of the rubber cord and tubing upon nerve-trunks, was not alluded to by Esmarch, and was brought to my notice in the case of a young man, aged 27, whose left elbow-joint I had excised by the single incision, at the Roosevelt Hospital, in June, 1873, for chronic arthritis, and in whom motion of the forearm on the arm was admirably perfect; yet as there existed sinuses over the ends of the ulna and humerus, leading to bare bone, the patient was etherized, February 13, 1874, and Esmarch's bandage applied, the rubber cord of a diameter of one quarter-inch being, as usual, tightly drawn three times around the limb at the junction of the upper and middle third of the arm, and the proposed operation performed.

The compression was continued about three-quarters of an hour, and the wounds made by enlarging the sinuses were dressed with charpie and gauze bandage.

After the inflammatory reaction of the wound had passed away, it was found that the patient was unable to flex or extend any of the fingers or the hand on the forearm. He complained of numbness in the tips of all his fingers, of the palm and anterior surface of the forearm. The motor paralysis remained unchanged to March 20, when he was kindly seen by Dr. Seguin, but the anæsthesia had yielded to hyperæsthesia in the dorsum of the fingers, though there was still abolition of tactile sensibility. The examination showed that the lesion was mainly confined to the median nerve. Since that time he has rapidly regained the use of the affected muscles under the use of the galvanic current.

Since recognizing in this way the possibility of such an accident, in the use of Esmarch's method, I have found in the *Medical Times and Gazette*, of January 24, 1874, three cases reported by Langenbeck, where paralysis had occurred in the median nerve after the use of Esmarch's method. Two of the operations performed were for pseudo-arthrosis, and one for necrosis; the resulting paralysis in two cases lasted two weeks, and in the other case it had continued three weeks, when he was discharged (cured presumably). Langenbeck, in consequence of this mishap, recommends that instead of using rubber tubing to compress the artery, an independent elastic bandage be used like those employed in forcing the blood out of the limb, and that it be fastened around the limb, after being drawn tightly, by a pin. In this manner the pressure on the nerve is distributed over a broader surface and an injury of it more successfully avoided The prolongation of the paralysis, in the case narrated above, is probably due to the narrowness and hardness of the rubber cord employed, as tubing flattens decidedly when applied, and makes thereby a broader pressure.

There is another situation where the same caution should be observed, and that is in the upper part of the leg, where the external peroneal nerve is readily accessible to pressure; though no instance of its paralysis has yet come to my notice.

It is possible also that accidents may result in atheromatous patients, from the increased arterial tension produced by the forced addition of the blood belonging to a limb, to the general circulation. Attention to this source of danger has been called by Mahomed, in the *Medical Times and Gazette* of August 9, 1873, in an article on the use of the sphygmograph in aneurism, in which he has shown that the general arterial tension is much augmented when compression is resorted to in the treatment of aneurism.

No 19 EAST 32D ST., N. Y.

Progress of Medical Science.

THE SULPHIDES IN FURUNCULAR AFFECTIONS.—Mr. Louis Lewis, writing to *The Lancet*, says: "A patient applied to me, suffering from an eruption of boils, which appeared in successive crops, and exuded a thin ichorous pus. I prescribed the sulphide of calcium in small frequently repeated doses (not more than a grain altogether during each day). It was given simply in water, and no other medicine was used. In a few days the pus became creamy and laudable, the inflammation became limited in area, and the boils rapidly died away, no fresh crop appearing.

CHLORAL IN CANCER.—At a recent meeting of the Société Therapeutique the efficacy of chloral in cancer was pointed out by Dr. C. Paul, who had used it in the shape of suppositories containing fifteen grains. Introduced into the vagina, they had produced sleep during the whole night, in cases where considerable doses of morphia had no anodyne effect, while the nature of the secretions, and especially their fetor, were favorably modified. Dr. Martineau mentioned a case of recurring cancer of the breast, which had almost reached the thoracic walls and the lung. Pledgets of lint, steeped in a solution of chloral, were introduced. Three days after, the surface had assumed a healthy hue and was granulating kindly, the fetor had vanished and the hemorrhage stopped. Cancer of the uterus had likewise improved, as far as the pain and fetor were concerned, under similar treatment.

BILLROTH'S CASE OF EXTIRPATION OF THE LARYNX; ARTIFICIAL VOCAL APPARATUS.—We recently gave an account of the case in which Professor Billroth, of Vienna, extirpated the larynx, on account of malignant disease. The man on whom the operation was performed was shown at the meeting of the Vienna Medical Society, on February 27th. The apparatus consists essentially of two curved canulæ—a tracheal canula and a voice canula; and, for vocal purposes, there is a tongue of silver-plate, capable of producing a deep note. This has been proved by experiment to be preferable to one with a high note, as it allows more space for breathing, and the air can pass more quickly, and more readily produce vibrations in the metallic tongue. By means of this apparatus the patient is enabled to speak well, with a clear sonorous voice; but before he can speak he is obliged to expectorate, to remove the secretion accumulated in the tube. Experiments have been made with a view to forming an apparatus of

elastic membrane, the tone produced by it resembling more closely the human voice than that made by metal; but it has been found to be more difficult to keep it clean, and there is the further objection that its elasticity becomes impaired by use. As a large portion of the epiglottis was also removed, it was thought at first that the patient would not be able to swallow—and, in fact, fluids passed out through the opening that had been made. He learned, however, to push the dorsum of the tongue back when he swallowed, so as to close the opening of the air-passage; and a special apparatus has been devised which acts as an artificial epiglottis. When the patient employed the apparatus the voice was monotonous, but the words could readily be distinguished.

NASO-PHARYNGEAL POLYPUS.—(From the "Vierteljahrschrift für die praktische Heilkunde," vol. 121, Analekten, p. 32. Translated by E. K. Henschel, M.D.) In connection with a former analogous communication, another very successful case of naso-pharyngeal polypus treated by electrolysis is reported by Dr. Paul Bruns (*Berlin. klin. Wochenschrift*, 1873, No. 32). The patient, 30 years old, since his 16th year suffered from a naso-pharyngeal tumor and imperviousness of the right nostril to the passage of air. At 18 years a tumor the size of a walnut was removed from the pharynx, through the mouth, by means of a scissors. In his 22d year a second operation was undertaken, including the removal of the cartilaginous part of the nasal septum. This operation was likewise unsuccessful. Since then the trouble gradually augmented; respiration, speech, and hearing in the right ear were compromised. In the course of the last three years repeated copious hemorrhages have occurred. On examination (the man being in other respects of vigorous constitution) a voluminous tumor, presenting the typical characteristics of a fibrous polypus, was discovered in the pharynx. It rested apparently, upon the arch of the post-pharyngeal wall, on the right side, filled almost the entire fauces, displacing the palatine arches, and reaching to the base of the uvula.

The tumor was free, of great hardness, the surface smooth and slightly nodular. Rhinoscopic examination showed the lower surface to be partially ulcerated. Besides this the right nostril was filled with mucous polypi. March 12th, the electrolytic treatment was begun, and the electro-puncture executed in the following manner: Strong needles of zinc served as electrodes, and were deeply embedded in the lower part of the tumor. To cover and isolate the needles Eustachian catheters of hard rubber were employed. One needle was introduced through the right nostril, and the other through the mouth, and in this manner nine sittings were held. Six elements of Frommhold's battery were invariably employed, the circuit being first established with one element, and the number of elements being in a like manner reduced to one before the circuit was broken. The time of the sittings varied from 10 to 25 minutes. Two other sittings were also held, at which the negative electrode was inserted into the tumor through the nasal cavity; the positive, armed with a wet sponge, was held in the hand or placed upon the sternum—the number of elements now varying from 10–20, and the time of the sittings being 30 minutes. The attendant phenomena were slight contractions from the establishment and breaking of the current, moderate lancinating pains in the tumor, metallic taste, audible crepitation, due to generation of gas at the points of puncture. Nothing worthy of mention occurred in the intervals between the sittings; not the slightest hemorrhage ever resulted. The first three sittings took place from the 12th to 14th of March, following which a copious secretion of pus and mucous concomitant, with a discharge of small tumor-particles. Rhinoscopic examination showed the under surface of the tumor to be in part ulcerated and in part gangrenous; besides which a marked shrinkage of the tumor was demonstrable. The 4th to 6th sittings were from the 19th to the 21st of March; subsequent to this the treatment was interrupted by intercurrent angina. When the treatment was again resumed, the tumor had diminished to half its former size. The 7th to 11th sittings took place from April 1st to April 7th. Already by this time a progressive decrease in the size of the tumor was perceptible. The patient having returned to his home, presented himself again after four weeks, when it could with certainty be substantiated by examination with finger and mirror that not the slightest trace of the tumor remained. A superficial cicatrizing ulcerated surface was visible on the right side of the pharyngeal arch, close to the base of the nasal septum, corresponding to the point of the former pedicle. The right nasal cavity was occupied by a mucous polypus. It having been removed, not the smallest particle of the tumor existed in the nares or pharynx; the patient was therefore declared entirely cured.

CONCRETIONS OF SAND IN THE INTESTINE.—Laboulbène has found these sandy particles on six different occasions. They have a yellowish or brownish color, and may measure a millimetre in diameter. The surface is uneven and covered with irregular crystals. A careful examination will usually show that the nucleus is of flint, over which are incrustations of organic matter, together with crystals of the triple phosphates. Some of the particles contain vegetable cells, which have not been attacked by the fluids of the intestinal tract.

This sand usually comes from without, and is the result of eating vegetable substances in large quantities, or perhaps the conscious or unconscious use of silicious matters.

The symptoms disappear after free evacuations from the bowels and the use of animal food.—*Allg. Med. Central-Zeitung*, 16, 1874.

INTESTINAL MYCOSIS, AND ITS RELATION TO MALIGNANT PUSTULE.—A number of observations have recently been collected from different sources, and the results tend to show that there is a connection of some sort between intestinal mycosis, or bacterial infection of the intestine, and the disease known as malignant pustule. Wagner has adduced some new cases, and supports the views advanced by Bollinger, Buhl, Waldeyer, and others, who claimed an intimate relation between these two diseases. In one case the intestinal disease was accompanied by a well-marked pustule. In most of the cases the patients had been employed about the skins of animals. Many of them were rope-makers, who cleansed foul horse-hair; one was a sable-dyer, and another worked in a brush factory. From an anatomical point of view the intestinal lesion was analogous to the pustular, for the bacteria penetrated the diseased villi and extented into the deeper tissues, just as they have been observed to penetrate through the papillæ of the skin in malignant pustule. These parasites, which corresponded to the Bacillus anthracis of Cohn, and Mesobacterium of Hoffmann, were found in all the layers of the intestine except the peritoneal, in the veins leading from the diseased points, and in one instance in a lymphatic gland. They were also found in hemorrhages of the brain.

Leube and Mueller have published three cases, in which they have arrived at very similar results.

One patient was taken sick after eating diseased

goat's flesh; in the second case the intestinal trouble was accompanied by a decided malignant pustule, and the third was infected by the second, having by accident occupied the bed which the infected person had vacated. The form of bacteria in these latter cases was punctate, while in the others it was thread-like. To test the infectious character of the disease, rabbits were inoculated with the diseased blood and pus, and when large quantities were used the animals became sick and died, and subsequent examination showed that the blood and internal organs were infested with bacteria. Further inoculations were successfully made on other animals. It is interesting to learn that one of the patients recovered. The treatment was carbolic acid internally and externally, and quinine.—*Berl klin. Woch.*, 7, 1874.

ARTIFICIAL PRODUCTION OF RICKETS AND OSTEOMALACIA.—The fact that lactic acid had been frequently found by chemists in the blood of persons suffering from rickets and osteomalacia, induced Heitzmann to make some experiments on the action of lactic acid upon the bones of living animals.

Selecting a number of dogs and cats, he contrived to have them consume daily a small amount of lactic acid, and at the same time injected it subcutaneously. As early as two weeks after the commencement of the experiment there was swelling of the epiphyses of the long bones, and of the ribs at the attachment of the costal cartilages, accompanied by diarrhœa and loss of flesh. These symptoms increased, and in the following week these bones began to bend in a marked degree. Microscopical examination showed that they presented the same appearance that is seen in the rickets of children. Some of the animals were allowed to recover, and then the experiment was tried a second time. The result was the same. After from four to eleven months of continued use of lactic acid in this way the bones gave the appearances of osteomalacia. The compact substance was very much thinned and the medullary tissue remarkably vascular.

In rabbits and animals living almost exclusively on vegetable food the case was somewhat different. The rabbits died in from three to five months. Guinea-pigs, however, developed marked symptoms of osteomalacia. The conclusions would seem to be, then, that carnivorous animals fed on lactic acid first develop rickets and then osteomalacia. Herbivorous animals, on the other hand, develop osteomalacia without previously having rickets. Finally, osteomalacia and rickets seem to be due to the same general cause, viz.: an excess of lactic acid in the system.—*Berl. klin. Woch.*, 12, 1874.

TRANSFUSION OF LAMB'S BLOOD.—Dr. Hasse, of Nordhausen, has transfused successfully with lamb's blood in 23 cases, dating from May, 1873. The results have been uniformly favorable. Coagulation of blood in the canula, which has proved a source of difficulty to many, has never prevented him from completing the operation. It will occur when the blood is allowed to stagnate before transfusion; but to avoid such a mishap he compresses the blood-vessels until the transfusion commences. If, however, a single drop of blood escapes before this period, whether it be from the artery of the animal or the vein of the patient, the canula must at once be removed and replaced by another. The blood pressure in a healthy lamb corresponds to a column of water from four to five feet high. The force of the natural injection is consequently much greater than is usually employed in indirect transfusion, that is, with any of the ordinary injecting syringes. This circumstance may account for the violent reaction which has often been observed, and would indicate that direct transfusion from the artery of the animal to the artery of the patient might be performed without any intermediate propelling apparatus. Thus far Hasse has only transfused by the former method, viz., from an artery of an animal to one of the peripheral veins of his patient. The success which he has had induces him to recommend this operation, though he states that in exceptional instances the method from artery to artery may be preferable.—*All. Med. Central-Ztg.*, 17, 1874.

NEW METHOD OF CAUTERIZING ULCERS, ETC.—Dr. Thores states that the following method of cauterizing affords the best of results, especially for ulcers, granulations of the cervix, fissure of the anus, etc. This consists in first cauterizing the part with a stick of nitrate of silver, and then immediately touching the white eschar thus produced with a stick of zinc. The eschar at once becomes black and hard; it becomes detached in from 24 to 72 hours, and exposes a clean sore, which generally cicatrizes very promptly.—*Gazz. delle Clin.*, Jan., 1874, and *Gazz. Med. Ital. Prov. Venete.*

EFFECTS OF THE INJECTION OF CHOLESTERINE ON THE BLOOD.—Dr. Müller, after having repeated the experiments which prove that the glycocerolate, the taurocholate, and cholate of soda do not, like the alcoholic extract of bile, exert a dissolving action on the blood-corpuscles, injected the bile salts into the veins of dogs. The bile salts thus injected did not produce any cholæmic effects, which is also true when bile is injected, even when the injection is repeated several times. Diarrhœa was the only phenomenon that was observed when a ten-per-cent. solution of the glycocholate of soda was injected into the veins during a period of fourteen days. The injection of four and a half centigrammes of cholesterine, dissolved in glycerine or soapy water, produced, on the contrary, tremors, apathy, difficulty of motion and of respiration, coma, and in one case delirium.—*L'Imparziale*, Jan., 1874.—*Gaz. Med. Ital. Prov. Venete.*

THE TOPICAL USE OF CHLORATE OF POTASH.—Prof. Gosselin thinks the chlorate of potash is much superior to all other local remedies in mercurial stomatitis; it does not, like some others, injure the teeth, but frequently does not act with the promptness desired.

Prof. G. uses a saturated solution of chlorate of potash, and, when there is much pain, he adds laudanum and cherry-laurel water. Pledgets of lint are to be wet with this solution and placed between the gums and the cheek, above and below. The lint is retained several hours, and may be renewed two or three times a day.—*Franc. Méd.*—*Lo Sperimentale*, March, 1874.

PYÆMIA AND HOSPITALISM.—Pyæmia was the subject of a prolonged discussion at a meeting of the Clinical Society of London on the 23d of last January.

Prescott Hewett read a paper in which he detailed 23 cases of pyæmia that had occurred in his private practice and under the most favoring circumstances as regards residence, attention, and previous health. In the great majority of these patients the attack followed very slight injuries and maladies. The results which the speaker drew were, that hospitalism is neither alone nor chiefly the cause of pyæmia, but that other causes, such as certain atmospheric conditions, can produce the disease in any location whatever. Paget was very decided in expressing his views that pyæmia occurs as frequently in private practice as in hospitals, but owing to the insufficiency of statistics in the former case, we had been unable to draw correct conclusions. He believes that the word "hospitalism" must be

abolished. Other speakers, among whom were Holmes and Hawkins, held similar opinions, which were based upon hospital observations. De Morgan believed that single cases might occur in private practice as well as in hospitals, but he was disposed to think that if several cases occurred in hospitals, after operation, the chances were favorable for the extension of the disease.—*Berl. klin. Woch.*, 9, 1874.

HYPODERMIC INJECTION OF ERGOTINE IN VARICOCELE.—In a case of varicocele which had existed for a long time, Dr. Bertarelli, of Rome, injected a solution of ergotine under the skin of the scrotum. The solution consisted of ergotine, 1 gramme; water, with a little alcohol, 2 grammes. The patient was ordered to maintain absolute repose and to make local application of cold compresses. The next day the varicosities had disappeared. The success was complete after another injection, which was attended by but slight local reaction.

Dr. Cittaglia had cured another case of varicocele by the same treatment. By the eighteenth day nearly all the varicosities had disappeared; and there was nothing but a slight induration of the corresponding testicle to be observed.—*Alm. di Térapie*, 1874, and *Lo Sperimentale*, March, 1874.

HEART DISEASE FROM SEVERE BODILY WORK.—A number of fatal cases of heart disease have been analyzed by Seitz, of Zurich, and he believes that he has been able to trace the origin of the disease, in a large class of cases, to over-straining the heart. The symptoms given during life were those of severe cardiac affections. The physical signs were weakness of heart action, more or less hypertrophy, friction, and valvular murmurs. The post-mortem appearances were thickening of the walls, dilatation of the cavities, with occasional granular or fatty degeneration of the muscular tissue of the organ. The valves were insufficient, but in other respects normal. In each of these cases the patient referred the origin of his trouble to excessive bodily exertion. The author believes that this disease may give rise to cerebral embolism by the formation of blood-clots in the heart. The termination of such cases is usually fatal, and absolute rest is the most important therapeutical indication.—*Deutsch. Archiv f. klin. Med.*—*Berl. Klin. Woch.*, 7, 1874.

FATAL RESULT OF INJECTION INTO THE VAGINA.—M. Lorain records an interesting observation of an injection into the vagina being followed by death. The patient was a young girl, sixteen years of age, who was suffering from vaginitis, probably of a blenorrhagic character. After an emollient treatment, consisting of baths and an injection of marsh-mallow, as the surface of the vagina could not be painted with a brush filled with solution of nitrate of silver, M. Lorain gave directions that a weak solution of the nitrate should be injected. This was accordingly done at 10.30 in the morning, with a small syringe, containing scarcely five centigrammes of the fluid. The quantity injected contained only one decigramme (1.54 gr.) of the nitrate, and it was thrown in with due care. Violent pain was immediately experienced. The patient displayed the most marked agitation. Ice was applied over the belly and to the vagina. The temperature of the vagina was 37.8° C., and fell the following day to 37.2°, but vomiting occurred. On the three succeeding days the condition remained unchanged. Stomatitis then supervened, resembling closely that produced by mercury. On the fifth day after the injection death occurred suddenly at 7 P.M. M. Lorain attributes the accident to the penetration into the peritoneum of a few drops of the pus proceeding from the passages and Fallopian tubes, consequent on the writhings produced by the pain. A post-mortem examination, made by M. Tardieu, showed that there was metritis, with suppuration. The *tubæ* were filled with pus, some of which had flowed into the peritoneal cavity and produced a profuse peritonitis. M. Lorain cites a number of other cases in which a similar accident had happened. He thinks that every woman attacked with vaginitis, accompanied with symptoms which show that the ovaries and Fallopian tubes are affected, is in great danger. The care of the practitioner should be directed to the prevention of all excitement on the part of the patient. Pain should be allayed by opiates and by hypodermic injections.

DESTRUCTION OF ONE OF THE HEMISPHERES OF THE BRAIN—RECOVERY.—M. Porta gives a remarkable case of recovery from this injury. A man aged twenty-eight received a severe blow which fractured his parietal bone, and spilled his brain; he remained in hospital several months in a critical state; the bone exfoliated, and the wound healed, but paralysis of one side remained. On examination one year and a half afterwards, a depression was found covered by cicatricial tissue, into which the finger could be pushed down, and a large void could be found. When the man hung his head the skin became bulged out, apparently with fluid, fluctuating and without pulsation. No intellectual loss was apparent, and paralysis alone followed the injury.—*Med. Press and Circular.*

TREATMENT OF THE ACUTE STATE OF BLENORRHAGIA WITH CANNABIS INDICA AND BENZOIC ACID.—Dr. Lamarre says (*Jour. des Connaissances Méd.*): "During seven years I have in more than sixty cases employed cannabis indica and benzoic acid, when patients have applied to me too late for the abortive method to be resorted to, when the discharge has been purulent and micturition painful, and have never failed of success when I have employed them together. The haschish alone diminishes the intensity of the disease, but is not always sufficient. Benzoic acid has made some cures, and several half cures, but the two in combination have never failed.

"I advise the tincture of cannabis indica to be used in doses of two grammes, and the benzoic acid in doses of one gramme in a mucilaginous mixture, in twenty-four hours—the usual hygienic measures being followed. For two years I have also used with great success injections of simple water made as often as possible (ten to fifteen times in twenty-four hours), and have always been able to commence with the balsamic and opium treatment within four days at the farthest."

USE OF PEPSIN IN THE TREATMENT OF DIPHTHERIA.—Dr. Doughly advises the following formula for softening and dissolving the false membranes of croup and diphtheria: Pepsin, 6 grammes, dilute muriatic acid, 5 drops, distilled water, 100 grammes. To be used by inhalation, in the same way as lactic acid, as advised by Dr. Weber.—*Revista Clinica di Bologna.*

NEW METHOD OF FACILITATING THE DELIVERY OF A HYDROCEPHALIC FŒTUS.—In *La Tribune Méd.* of April 19th, Dr. Garreau, speaking of this affection, recommends puncture of the arachnoid or subarachnoid space as a means of facilitating the delivery of a hydrocephalic fœtus in the case of breech presentations, the puncture being made in the cervical or dorsal region, as the circumstances of the case will admit.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, May 15, 1874.

REORGANIZATION OF THE AMERICAN MEDICAL ASSOCIATION.

A SHORT time since a member of the Medical Society of the County of New York, in making a report as delegate to the State Medical Society, among other things, stated that whenever he attended a meeting of the latter body he was so well satisfied that he always resolved to attend it again, but that each time he was present at the annual gathering of the American Medical Association he declared that it would be the last. It is true that the comparison was not by any means flattering to the attractions of the American Medical Association, but it nevertheless represents a state of professional feeling which has been growing in strength during the past few years. This gentleman was the type of a class who attend meetings to be edified, and who represent the progressive medical mind of the country. It is useless for such of the profession as are still interested in the prosperity of the American Medical Association to shut their eyes to the fact that such men are increasing in numbers every year.

One way to counteract this tendency is to make the meetings interesting and profitable to these men. We have repeatedly pointed out how this may be done, by such an alteration in the plan of the organization as shall effectually exclude profitless discussion in open meeting upon trivial matters of ethics; by raising the standard of delegateship and restricting its privileges to the representative societies only; and by stimulating purely scientific work among the members. We are in favor of devoting the whole time of the meeting to matters of scientific and practical interest to the profession. We care not how this end is attained, and are not wedded to any particular theory as to the particular means to be employed. In fact, everything tending towards the result deserves candid consideration, and the whole matter cannot be discussed too thoroughly.

The new regulation in regard to the different sections will, in our opinion, have an important bearing upon the general question, and deserves a fair trial. The change proposed is a radical one, but all the good that may come of it may be jeopardized at the start by striving to do too much. The intention is, as our readers are aware, to have systematic reports of all the sections made by competent short-hand reporters; these reports to be printed the morning following for the use of the members of the Association. On its face this appears to be a very proper step, and one which promises a vast amount of good to all concerned. If the plan could be carried out successfully, nothing better could be desired. The more the matter is examined, however, the greater seem to be the difficulties in the way of a consummation of the plan.

The making of accurate verbatim reports of these sections is by no means easy. The practice of employing newspaper reporters for this purpose has proved itself utterly impracticable. Although these gentlemen may be experts in their way, they invariably fail in making anything like a faithful account of the proceedings. The main cause for this is a want of knowledge of the technical terms so freely used in all medical discussions, and the natural consequence is a frightful number of gaps to be afterwards supplied either by the speaker himself, or, worse still, left to the discretion of a secretary, who not unfrequently has to guess what was meant. We contend that no one can make the reports as they should be made unless he be a competent medical man who is a short-hand writer. If the services of one such can be secured for each section the Committee of Arrangements may well congratulate themselves in taking a great step in the direction of making the meetings interesting and profitable. It would be much better, in case such reporters cannot be engaged, which is altogether likely, to entrust the work to medical men who are able to make good and intelligible reports in the ordinary way. In fact, a verbatim report, except in the larger sections, is by no means necessary to accomplish the real object in view. Our experience teaches us that as a rule they are not worth publishing as such, and seldom, if ever, are readable, unless very liberally pruned of redundancies, irrelevant remarks, and stultifying suggestions. There is always room for the exercise of the widest possible judgment on the part of a competent medical reporter, the chances being that he may have rather too full than too meagre a report.

Another element in the success of these sections is to make the meetings in every respect worthy of the reports to be made. Not every one who may desire to read a paper should be allowed to do so. There should be connected with each of these sections a committee whose business it should be to decide whether or not a paper should be presented. This is one of the reasons why the State Society is so successful in its meetings, why so much valuable material is annually presented

to the members for their consideration and discussion. A proper system could be inaugurated with this end in view, without much trouble, and could not fail to work to the satisfaction of all interested in the special department to which a given section might be devoted.

All papers of any length should be presented in abstract, the shorter the better, and such abstracts should accompany the discussions, the paper in full to be referred to the Committee of Publication.

We have always thought that a good plan would be to refer all papers back to their authors with a recommendation, if worthy, to be published in some one of the medical journals. This would relieve the Committee on Publication of a great deal of labor and responsibility, while it would be serving the profession of the country an excellent turn by laying before it, without the usual delay which attends the appearance of the papers in the expensive volume of Transactions, a quantity of practical material which can be turned to immediate use. Aside from this, there would be an advantage of gaining a much larger and more appreciative audience than if the said paper took the precarious chances of the very limited circulation of the yearly volume. If the reports of the sections are properly prepared, and within the time provided by the new arrangement, they could be used as associated press reports, by all the medical journals throughout the land, and prevent the possibilities of any misrepresentation, which is so foolishly claimed by some gentlemen to be made by some journals which dare say that the Association is not what it should be. Again, the very publication of these proceedings in the journals would be the best kind of stimulus for special efforts by the first minds of the country. This is the reason why most of the best medical societies are so well patronized by the leaders of medical thought, and is oftentimes the only explanation why a continued interest is manifested in the proceedings.

When a delegate or member journeys hundreds of miles to attend a meeting, he has another object in view than mere social entertainment. The expected profit centres itself in the idea of gaining some useful information. If this expectation is not realized, he returns home disappointed, and vows never to attend another meeting if he can help it.

Social reunions are good in their way, but no number of working medical men can be coaxed from their business year after year on the mere promise of collations and excursions. Every Committee of Arrangements should do their utmost to make the meetings a scientific as well as a social success. Not only should they see to it that the sections should be properly conducted, but that the general meetings should be occupied for the most part in scientific business. A special effort in the direction of making these attractive in this respect would be to have an address on some of the medical topics of the day, by some of the representative men from different parts of the country. Prof. Gross, of Philadelphia, struck the key-note in regard to this point, when he suggested the delivery of addresses on medicine, surgery and obstetrics, to occupy the time taken up by reports of medical literature, medical education, and similar topics. Perhaps the most memorable meeting of the Association which we ever attended was one in which Brown-Séquard gave a lecture in open session upon the diseases of the nervous system. Similar lectures have been delivered by other distinguished gentlemen since that time, and the success has been such that it needs no special argument in their favor. Care, however, should be taken by the Committee of Arrangements to have such lectures thoroughly representative, original, suggestive, and practical—something to which each member in attendance can look back with satisfaction, something which may seem to encourage him to work when he gets home, something which may give him new ideas of the treatment of disease.

The Committee of Arrangements at Detroit are so anxious to make the meeting a success, that we have thought it not out of place to offer some suggestions which may have a tendency to that end. We heartily sympathize with them, and would be glad to see the Association once more on its feet, to know that it had straightened itself up to the work expected of it; and so long as it has a spark of vitality left in it we shall not tire in doing our best to uphold its hands. At the same time that we are happy to do this, it is nevertheless our duty to state what has long been our conviction, that unless some change in its organization is effected, some departure is made from the old routine of sluggish indifference to the interests and wishes of the profession of the United States, its death is inevitable.

While urging attention to the scientific business, we do not forget that the Association have some legislative functions to perform. It is not necessary that such business should be transacted in full session. In all matters connected with medical ethics there are always a great many details to master before there can be a proper understanding of the merits of any case. We are in favor of having all the pros and cons discussed, but the only way that it can be done satisfactorily and with the greatest economy of time to all concerned, is by a large and representative committee, whose report should be accepted or referred back, as the circumstances of a general vote might determine.

Our most successful societies are managed in this way, and the harmonious workings of the system give no chance for improvement. The New York Academy of Medicine nearly ruined itself by the discussion of questions of ethics in open session—in fact, the time which should have been devoted to other and weightier matters was so completely occupied by the ventilation of the opinions on ethics of certain members who could have an opinion on no other subject, that the best men absented themselves. Finally, the much-needed reorganization was effected, and the

purely business element was confided to a well-chosen council with almost absolute power. At once the character of the meetings changed, and the way was opened for scientific work proper. And after all, a council can settle vexed questions better than members who may chance to be present at any meeting at which a question may be brought up. A council has special facilities for examining matters of a more or less private character, which could not be done in a promiscuous meeting. It is apt to take pride in having its report representative of the general sentiment of the profession; and is inclined to give digested reasons for the opinions entertained. The merits of the case must necessarily be studied in all its relations, a healthy conservatism pervades, as a rule, the recommendations made, and sound judgment tempers the suggestions offered. Again, there would not be any likelihood of taking extreme grounds either way, such as in open meeting would be inevitable where interested parties are generally the only disputants. As we have so often said before, we believe that the committee-plan is the only one which shall effectually prevent the family quarrels so frequent of late in the general sessions. We are happy to be officially informed of the fact that such a council has been created, and that the plan which we have so persistently suggested for the past few years, has at length been adopted. At the coming session there will doubtless be an opportunity to test its merits.

NURSING AS A SCIENCE.

As there is no unmixed good, so we seldom or never find unmixed evil. While the nation is groaning under the mischiefs, the demoralization, consequent upon our late war, we may, by looking closely, discover also many benefits. Not the least of these is the development of new sources of power, and of new principles in the care of the sick and of the wounded. It has opened a broad field of action for women, ladies, which perhaps they would never have entered in any other way.

The idea of war is terrible, and there is something unphilosophical in maiming men and blowing them to pieces, and then setting earnestly to work to put them together again, because the patchwork never looks as well as the original pattern. Still, if men will fight, we may rejoice that the means of help are at hand for those who are so happy as to survive. In this, ours is distinguished from ancient warfare, in which, so far as we can learn, the wounded were left to die.

In our camps the nursing abilities of women were developed. Just as they had begun to cry out for a wider field of action, and as the Governor of one of the States had characterized a large proportion of them as "anxious and aimless," they found this new outlet for their activities, and so happy were men to receive their "handy" and gracious assistance in camp and hospital, that they never stopped to inquire whether the thing were according to rule or not.

The tale has been told often enough; and having learned what she can do, woman is too wise to retire again to needle and novel and her "sphere," unless the same be expanded enough to allow her a place to work. There are those who will study medicine, who love it and choose to follow it, and who shall gainsay them? But it remains a fact, that few if any women can bear the wear and tear of ordinary medical practice, the night-work, the irregular hours, and the frequent demands upon physical strength.

There are branches of the profession which they can pursue, but we hope never to see them "general practitioners," because there is a more important place for them, and one in which a medical education will be equally valuable. They can be nurses, not mere hirelings, but intelligent, cultivated nurses, with human lives in their hands.

We know there are many diseases in which treatment is nothing, and nursing is everything; where the skilled nurse is really more valuable than the doctor, if you can have but one. We all know the misery of seeing a patient slipping through our fingers, in spite of all our care and skill, through neglect or ignorant interference. We all know what an angel of light is a good and intelligent nurse to us in our time of need. But at present this is in a great degree a matter of chance. If, like "reading and writing," nursing comes by nature, all goes well; there are a favored few, and the rest of the world suffers. Ignorance, and neglect, and queer superstitions carry the day.

Our want is educated nurses. We have made and are making some faint attempts to supply this want—we are beginning to have training schools. In other countries, as in Russia, these schools are established and controlled by the government, and may require and insist upon a long and thorough course of instruction. Here, where all is voluntary, we have many difficulties to contend with, the want of money, and the great national want, *the want of time.*

We are in too much of a hurry, to learn anything well. Still we may hope in time to gain in this regard—and we will do as well as we can.

Books may help us. Nursing is a science, best learned by long and careful training. Failing in that, the experience of one who has had that training may be the best guide we can command. Miss Florence S. Lees,* an English lady, has written a book, which she dedicates to Miss Nightingale, in which she gives the results of her experience in French, German, and English hospitals, in time of peace and war.

Sir Henry Acland writes an introductory chapter, the key-note of which is nursing is the medical work

---

* Hand-book for Hospital Sisters. By Florence S. Lees, Superintendent of the Ambulance of H. I. & R. H. the Crown Princess of Germany and Prussia, for the wounded in the late French and German war. Edited by Henry W. Acland, M.D., F.R.S. W. Isbister & Co., 56 Ludgate Hill, London, 1874.

of women. Miss Lees dwells upon the importance of thorough training, understanding practically every part of the work, from the least to the greatest; the qualifications of a nurse, for not every one is fitted for the great trust; all the details of hospital management.

Then follow—Ward Duties; Bedding and Bed-making; Medicines, Poultices; Ward-Dressing; Leeches, Cupping, Blistering, Bandaging and Surgical Work; Fevers, Antiseptics and Disinfectants.

Also general directions for preparing food for the sick—one of the most important departments. All of us know the miseries of having a patient starved, or more generally stuffed with improper food.

"Doctor, he'll die, if he don't eat."

"Madam, he'll die, if he can't digest."

Our poor sick fellows in the old days in camp could tell what it was, when men brought them a plate of fat pork, or hard bread and a sodden potato, for a fevered palate.

Medicine is very well, but, dare we say it, the nursing and the feeding are responsible for the patient's recovery. Medicine may drive out the enemy, but it yet remains to repair and fortify the citadel. Some day the people will find this out, and help us with money, which, with our profession, does not so much abound.

In the good time coming we shall have pavilion and barrack hospitals, less imposing and *less costly*, but better for the patients; and thorough training schools, where nursing as a science shall be taught, and practised. Until then such a book as this of Miss Lees' will be most valuable, and when carefully studied and often referred to, will help the efficient, while it will, we trust, discourage the ignorant and inefficient from undertaking work which is too high for them.

It is only when we read how many things are to be learned, that we appreciate the vast importance of a thorough professional education in a nurse.

Reviews and Notices of Books.

A DICTIONARY OF MEDICAL SCIENCE, containing a concise explanation of the various subjects and terms of Anatomy, Physiology, Pathology, Hygiene, Therapeutics, Medical Chemistry, Pharmacology, Pharmacy, Surgery, Obstetrics, Medical Jurisprudence, and Dentistry; Notices of Climate, Mineral Waters; Formulæ for Officinal, Empirical, and Dietetic Preparations, with the Accentuation and Etymology of the Terms, and the French and other Synonyms. By ROBLEY DUNGLISON, M.D., LL.D., late Prof. Institutes of Med. and Med. Jurisprudence, Jeff. Med. Coll., Phila. A new edition, enlarged and thoroughly revised by RICHARD J. DUNGLISON, M.D. Phila.: H. C. Lea. 1874. 8vo, pp. 1131.

THERE is probably no medical work, a new edition of which has been more earnestly looked for than Dunglison's Medical Dictionary, none for which a revision and amplification was more a necessity. For forty years it has maintained its place as the best Dictionary of Medical Science that has during that time been published; in fact, few scientific medical works have enjoyed a reputation equal to it. The edition before us was commenced by the lamented author, and has been completed by his son, whose talent in this direction is a cause for congratulation to himself and to the profession at large. We have examined the work in its different parts, as much, in fact, as the duties of a conscientious reviewer demand, and as the result of our investigation we are pleased to record our gratification at the success of the editor in his new rôle. We can say nothing better of him than that he worthily occupies the position of his father, and has proved himself the capable interpreter of his father's designs. When the plan of a work is so generally known to medical scholars, and its great success so thoroughly admitted, it is generally safe to speak of it in terms of commendation—to find fault with it is, however, no easy task. This part of the critic confines itself to the labor of analyzing, almost word for word, a labor-task almost equal to actually editing the book. We have, however, done the best we could to find any inaccuracies and avoidable omissions, but have failed to discover any. On the contrary, the more we have examined the work the greater has been our surprise that it contained so much useful information.

Having said this much, we come to notice the peculiarities of the present edition in the shape of additions and improvements upon its predecessors. The large number of new words introduced into our medical vocabulary has naturally necessitated much addition to the size of the work, which necessity has been met in part by the enlargement of the size of the page. The editor states that more than six thousand subjects and terms not embraced in the last edition are included in this. A very desirable improvement also consists in the use of heavy type for all the terms, and small capitals for synonyms and subordinate words. Under the subject of Weights and Measures is an explanation of the relative values of the quantities employed in the officinal formulæ of this country and Great Britain, which latter, as is now well known, blends the formulæ of the Dublin, Edinburgh, and London Pharmacopœias.

The most that we can say for the present edition is that it is fully up to the requirements of the times, and fully sustains the enviable reputation which this Dictionary has always maintained of being incomparably the best of its kind in any language.

A HANDBOOK OF THE THEORY AND PRACTICE OF MEDICINE. By FREDERICK T. ROBERTS, M.D., B.Sc., M.R.C.P., Fellow of Univ. College. Philadelphia: Lindsay & Blakiston. 1874. 8vo, pp. 1040.

DR. ROBERTS' book is avowedly nothing more than a compilation intended as a comprehensive guide in the study of medicine, to the medical student and young practitioner more particularly. We are not aware that the author has given us anything original either in subject-matter or plan, but he has, nevertheless, performed the work he set out for himself at the beginning in a very thorough and satisfactory manner. As a gentleman who is evidently a practised hand in preparing medical students for examination, he has become thoroughly acquainted with their wants, and has cultivated a faculty of imparting his information in an intelligible, terse, and straightforward manner. As a work its comprehensiveness entitles it to be called a model text-book, rather than a mere manual. It is unnecessary to speak of the different sections of the treatise any more than to say that they are exceedingly well worked up, giving proof of extensive knowledge, a well-balanced practical mind,

and an honest regard for the plain unvarnished truth. The book is well printed and well got up.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 2, 1874.

Dr. Austin Flint, President, in the Chair.

TREATMENT OF HEMIPLEGIA.

The paper for the evening was read by Dr. Geo. M. Beard, upon "Practical Points relating to the Treatment of Hemiplegia."

The leading features of the paper were as follows:

Treatment should be begun early. In general (with regard to electric treatment) too strong currents have been used, and have been continued too long. Electricity is a sedative as well as stimulant.

There is no need of producing another lesion of the brain by employing electricity. A galvanic current may be sent through the seat of the disease in the brain, and local applications may be made to the muscles when the effects of the lesions are manifested. The spinal cord becomes degenerated from lack of use, shown by stiffness of the muscles, etc.; hence the electric treatment should also be directed to the spinal cord. This is an important point. Recent experiments have shown that a galvanic current can be sent through the part in the brain where the lesion is supposed to exist. Outside of theory, the following are practical considerations of much importance.

1. Enlisting the will of the patient to assist in the moving of the muscles. Get the patient to throw all the cerebral force into the movement of a hand or foot. The rapidity of the recovery depends very much upon the organic will of the patient. The medical man can accomplish very much more by urging that will into resolute action.

2. Relax the muscles at the time the application of the current is made. This is accomplished by giving the muscles artificial support, by an assistant's hand or otherwise, while the current is being applied. A contraction can be obtained when the muscles are supported or placed in a relaxed condition, when it cannot otherwise be obtained. It is very beneficial to maintain the artificial support throughout the entire course of treatment. The apparatus of Dr. Van Bibber, or the rubber muscle of Dr. Sayre, may be employed for this purpose with advantage.

He had found some difficulty in making *easy* attachments for the rubber muscle. It is desirable to have something which the patient can have adjusted, and can wear with comfort.

3. Free application of dry or moist heat to the muscles and joints.

Localized dry heat can be conveniently applied by means of clay tubes, which can be made of any shape or size desirable. The tubes can be heated in an oven, covered with a cloth when removed, and then the arm or leg can be inserted and permitted to remain for a number of hours. This should be repeated once or twice a day.

The use of this means is beneficial, from the fact that it improves muscular nutrition and the nutrition of the joints.

It is especially beneficial in the treatment of the small muscles of the hand.

5. Passive movements, especially of the shoulder-joint.

This should be begun early and done very much more thoroughly than is customary in a majority of cases.

5. *Massage.* This can be applied to individual muscles.

When this means is alone employed it is not productive of very wonderful results. Indeed, the same, to a considerable extent, may be said of all these measures. All these measures may be adopted at once. Make one strong pull all together. It is like the farmer's pulling out a stump by attaching many horses at once, and not by hitching up one at a time, working him until he is exhausted, and then attaching another.

6. Use of nerve and brain food.

This embraces cod-liver oil, phosphorus, etc., etc. Strychnia, hypodermically used, is also very serviceable.

Dr. Andrews, of the State Lunatic Asylum at Utica, has given a formula for preparing cod-liver oil which disguises its terrible taste, and places a valuable agent at our command in almost every case.

Dr. Squibb has remarked to me that he regarded it as the best formula he had ever seen. The chief objection to it is the fact that it is difficult to get the druggists to prepare it in the proper manner, because it requires so much time. When thoroughly prepared it will keep well for a long while.

FORMULA.

Yolk of eggs	No. iv.
Glycerine	℥ i.
Cod-liver oil	℥ iv.
Phosphoric acid dilute	℥ ss.
Sherry wine	℥ ii.
Essence of almonds	ʒ i.

The eggs and glycerine are first to be carefully triturated in a mortar, and while the trituration is continued add the oil, drop by drop. When this is done, the acid, wine, and essence may be added. The above is not the precise formula used at the Asylum, but it is essentially the same. The manner of making the emulsion is the important feature. The amount of phosphorus can be varied to suit different cases, or other remedies may be added, such as arsenic, etc.

A number of cases were then cited, illustrative of the benefits which may be obtained by placing in practice the items of treatment mentioned.

Three things are noticeable relative to prognosis:

1. There is a tendency in a majority of cases, which are not speedily fatal, to slow but spontaneous recovery up to a certain point. Cases, however, which are properly treated will improve much more rapidly than if left to themselves.

2. In those cases where spontaneous recovery is evident, and will be carried on to a certain point, treatment should be carried along side by side with the spontaneous improvement, and not deferred until spontaneous improvement has done its work.

3. Prognosis in cases complicated with hysterical and nervous symptoms, is better than in cases which are not so complicated. A hysterical, nervous temperament seems to antagonize the effects of the disease. The nervous are easy to make sick and easy to make well, while the lymphatic are hard to make sick and hard to make well.

Dr. J. J. Mason remarked that he could not refrain from criticising one portion of the paper just read, and that was with reference to the passage of a continuous galvanic current through the brain-substance. It is

perhaps a measure worth trying, but for a measure to be *indicated* as properly belonging to measures to be adopted, it must have been tried in a sufficient number of cases, and have been followed by results which can be traced directly to the action of the remedy.

Benedict of Vienna, Gross of Paris, and Althaus, were mentioned among the advocates of the measure, but none of them have been able to report any cases of success, except perhaps it may be in some hysterical women. From his own observation, but chiefly from study, he could not see any indication for resorting to the measure at all.

Dr. Neftel remarked that when there was apoplexy the cause is not a local but a general condition of the walls of the blood-vessels. This condition must be taken into consideration while treatment is being adopted. There are certain cases where, upon post-mortem examination, the gross appearances of the brain remain unchanged, but the microscopic lesions will be found to be important, such as are connected with the perivascular spaces, etc. As a secondary effect of such lesions, there may be affection of the nervous elements and consequent atrophy, etc. It is further known that such lesions are produced by irregularities in the circulation, and these again are produced by affections of the vaso-motor system. It is also important to take these conditions into account in the treatment. Regards the use of stimulants as bad. One of the best remedies, from his own experience, is the galvanic current passed through the brain and sympathetic. It must be used, however, with the greatest care, if injury would be avoided. The current should be very mild. Arsenic is also a very important remedy. It has the power of preventing such congestions. Administer from one to three drops of Fowler's solution once or twice a day, and continue it for a month or more.

It is important never to forget that the affection of the brain calls forth a secondary affection of the spinal cord; hence the spinal cord should receive treatment at the same time, in order to prevent, as much as possible, those secondary degenerations.

Dr. Van Bibber cited a case in which the improvement which had taken place as the result of placing the muscles in a state of relaxation, was much greater than could reasonably have been expected without the adoption of this measure. He also cited a case of *ptosis* in which the lid was raised by a thin piece of rubber band attached to it by means of court-plaster, and then covered with collodion, and the other extremity secured to the forehead in the same manner. The benefit, which had accrued since the application of this simple device, had been marked.

THE NEW YORK NEUROLOGICAL SOCIETY.

A stated meeting of this Society was held at the College of Physicians and Surgeons, on Monday evening, the 4th inst., when the President, Dr. William A. Hammond, delivered an inaugural address on "The Effects of Alcohol upon the Nervous System."

The paper was quite extensive, and embraced the results of a series of experiments made by the author. In the course of the reading, test-tubes were exhibited which contained the products from distillation of aqueous extracts of the brain, spinal cord, large nerves, and blood, respectively, of a rabbit, which had, for ten days preceding its death, been obliged to ingest considerable quantities of alcohol, and which had taken its last dose six hours previous to being killed. Examination with a test solution of bichromate of potash with sulphuric acid, showed alcohol to be present in all excepting the last, and the distillates from the brain and spinal cord contained a sufficiently large amount of alcohol to enable it to be detected by the sense of smell.

Speaking of the general effects of alcohol upon the system, Dr. Hammond recited experiments made upon himself, in 1856, in which he tried, first, the use of alcohol, together with an allowance of food sufficient in itself to sustain the body; second, with a quantity of food which fell short of the amount required to nourish the system; and third, a quantity of food greatly in excess of what the system could consume. The results were to show that in the first series the use of alcohol deranged the functions of the economy; in the second, it prevented a loss of weight, which would otherwise have taken place, and seemed to take the place of a certain proportion of food; and in the third, it acted as a poison, persistence in the use of which would have terminated seriously. The Doctor mentioned the theory which, to his mind, came nearer to explaining the healthful action of alcohol in the economy than any other, viz., that in certain states of the system alcohol seems to combine with some of the earliest forms of substances which are the result of retrograde metamorphosis, forming compounds which may again be used in the nutrition of tissues, and which just so far take the place of food, introduced from without.

He recited a long list of the diseases and conditions which depend upon the wrong use of alcohol, among which the different forms of sclerosis played an important part, and referred particularly to the acute and chronic forms of alcoholism; saying that the former should be distinguished as being divisible into two varieties: one, dependent upon the presence of alcohol in the circulation and nerve-tissues, being best treated by eliminating remedies, such as diuretics, diaphoretics, etc., alcohol and opium being decidedly contraindicated; while a second condition, being one of exhaustion following the effects of alcohol poisoning, could best be treated by just the remedies which would be inadmissible in the first variety.

For those who were the victims of chronic alcoholic intoxication, and had lost the power of controlling their appetites, he advocated *vigorous* restraint; as complete as that exercised over lunatics, with the addition of legal penalties for acts of infringement upon the laws of society. He referred to the examinations made and recorded by Dr. J. C. Peters, in 1843, with regard to the hardened condition of the brains of those who had died of chronic alcoholism; and expressed the hope that the question of the action of alcohol upon the nervous system would receive the earnest attention of the members of the Society.

Remarks were made by Doctors Lente, Willard Parker, J. C. Peters, Clymer, and others, and it was resolved to continue the discussion of the paper at some future meeting of the Society.

The attendance was very large, numbers of clergymen, lawyers, and other than medical men being present; and Dr. Meredith Clymer, President of the Society of Neurology and Electrology, occupied a seat on the platform.

The Medical Staff of the New York Foundling Asylum consists of Doctors J. B. Reynolds, J. Lewis Smith, Chas. C. Lee, and Joseph O'Dwyer. There is no resident staff, the directions of the Visiting Physicians being carried out under the supervision of the Sisters of Charity.

MEDICAL SOCIETY OF THE EASTERN DISPENSARY, N. Y.

DR. R. J. O'SULLIVAN, PRESIDENT, in the Chair.

INCISED WOUND OF TENDO-ACHILLIS, WITH COMPLETE DIVISION.

DR. GEORGE H. MITCHELL introduced the following case, accompanied by sketches illustrative of the lesions:

The patient, Jos. E. R., age fifty, publisher, 59 Beckman street, City, was present by invitation. On Friday evening, January 9th, while bathing at French's Hotel, thrust his right foot through the porcelain basin of a stationary washstand, and the sharp edge cut through the skin, fascia and tendon, followed by copious arterial hemorrhage. This latter was speedily controlled by tortion and styptics, and the lower cut end was observed standing out in bold relief, the surrounding skin retracted, and to the touch feeling like a painter's brush, the interspace between the cut extremities being about three inches.

By a splint firmly fixed on anterior aspect of the leg and below the knee, the foot was extended. Strips of adhesive plaster were then applied over the calf, crossing like a pair of suspenders, and secured under the plantar arch; the edges of the wound brought together with two stitches, the limb placed on an *inclined* plane, and the whole treatment continued thus, and completed with application of ice-cold water dressings.

The fifth day the patient rises on a cane, and the seventh, in a shoe with high counter, an initial bandage and woollen sock, attends to business and other duties, in his carriage, and is to-day able to walk with the help of a cane short distances.

The gastrocnemius and soleus, parent muscles of this tendon, are noticeably quiet, any effort on their part in the lifting of the heel, even poising the weight of the body on the injured foot, being instantly followed by the patient quickly tottering to fall.

Queries.—On this thirteenth day after the injury, is this good result exceptional? and what would be the effect of bringing the cut ends together by silver sutures?

DR. O'SULLIVAN considers this case remarkable in result, also rare in occurrence; would have prognosed a year.

DR. ABBOTT saw a case of a woman in whom the tendon was cut by a broken edge of a chamber vessel; locomotion in about twelve months. This result is remarkable.

DR. SKIFF considers the suture has not a precedent. Had a case of a lad 13 years of age, cut by a mower; was under observation about a year, and at the end of that time walked tolerably well. A second case of an old lady, frightened, stepping hastily from her carriage, ruptured this tendon; saw her about a year afterwards, and she walked round pretty well.

DR. GARRISH thinks the suture thus employed should be silver, or other metal. The present result excellent.

DR. MULREANY never had a case of injury to tendo-achillis of like character. Heard of a case, while in Ireland, of a man cutting the tendon with a shearing-hook, while harvesting seaweed. No other assistance at hand, a shoemaker sewed up the wound; in a few months the one foot was apparently as strong as the other; considers twelve months remarkable to secure good result.

New Instruments.

A NEW TORSION FORCEPS.

SOME two years ago Professor Post presented at the Pathological Society of this city a forceps invented by Dr. Hewson, of Philadelphia, for arrest of hemorrhage by torsion; it being so arranged that one portion of the forceps steadied the vessel, while another gave it the necessary rotary motions. Mr. Stohlmann, of the firm of Geo. Tiemann & Co., has since constructed an instrument on the same principle, but differing somewhat from the forceps of Dr. Hewson, from which he received the idea. As will be seen by the cut, a blunt-nosed artery forceps has its blades closed upon the vessels by means of a slide, which is controlled by a rod passing through the shaft and into the handle, where it terminates in a button. Sliding upon the shaft of the artery forceps is a "carrier," which supports the pivot of another pair of forceps. The blades of the latter are curved so as to grasp the vessel beyond the point seized by the first pair, and catchers are attached to the handles so that the forceps can be held fast without the help of the operator.

In using the instrument the forceps last described is opened, and the artery forceps projected between and beyond its blades; the vessel is seized, drawn from its sheath; the second forceps is then pushed forward and made to grasp the vessel, and then, without any risk of the relation of the two forceps to one another being disturbed, the first pair can be rotated, and the twisting of that portion of the vessel between it and the retaining forceps accomplished.

ARTICLES IN OUR EXCHANGES.

ANATOMY AND PHYSIOLOGY.

The Siamese Twins at the College of Physicians. Phonographic report. *Phila. Med. Times*, 121.

The supply of nerves to the skin. S. WEIR WITCHELL. *Phila. Med. Times*, 126.

The anatomists after Vesalius. P. S. CONNER. *The Clinic*, March 28, 1874.

Experimental investigations into the functions of the human brain. ROBERTS BARTHOLOW. Wood-cut. *The Am. Jour. of the Med. Sci.*, April, 1874.

A symmetrical skull and atlas in two segments. Wood-cut. W. W. KEEN. *Ibid.*

Peristaltic action of the arteries. L. A. STIMSON. *N. Y. Med. Jour.*, April, 1874.

Transfusion of water in the capillaries under blood pressure (continued). KORNER. *Allg. Wien. Med. Ztg.*, 1, 4, 5, 6, 7, 9, 10, 1874.

Contribution to the subject of urinary deposits. EICHHORST. *Berl. Klin. Woch.*, 7, 1874.

Chegne-Stokes' respiration. FILELNE. *Ibid.*, 13, 1874.

The reflex action of the nerves on the vessels of the pia mater. KRAUSHE. *Virchow's Archiv*, Feb., 1874.

The form of the upper part of the occipital bone as a characteristic of the human skull. (Reply to Merkel.) JOSEPH. *Ibid.*

On the first appearances of development in the egg of the pond muscle. FLEMMING. *Archiv f. Micros. Anat.*, 3, 1874.

The development and proliferation of epithelium and endothelium. ZIELONKO. *Ibid.*

Results of the electrical examination of the cerebral cortex of an ape. HITZIG. *Berl. klin. Woch.*, 6, 1874.

Crystalline forms of the nitrate of urea. MURRI. *Sperimentale*, Feb., 1874.

Supernumerary vertebræ and abnormal pelvis. MACARI. *Ibid.*

On the structure of tendon tissue. STEPHANINI. *Gaz. Clin. d. Palermo*, Dec., 1873.

On a free communication between the vena porta and the right iliac vein. GIACOMINI. *Giorn. del R. Acc. di Med. di Torino*, Jan., 1874.

The functions of the nerve ganglia of the heart. PAGLIANI. *Ibid.*

Micro-chemical reaction of the diphtheria parasites. LETZERICH. *Berl. klin. Woch.*, 6, 1874.

The treatment of diabetes mellitus. BORAGINE. *Sperimentale*, Feb., 1874.

Hypodermic injections of the bisulphate of quinine in typhoid fever. RAVICINI. *Revist. Clin. d. Bologna*, Jan., 1874.

Sudden intestinal obstruction. FOOTI. *Il Raccoglitore*, Feb., 1874.

Remarks on the treatment of diabetes mellitus. BUDDE. *Hospitals Tidende*, 8, 1874.

Contribution to the study of cancer and tuberculosis. COLONIATTI. *Giorn. del R. Accad. di Med.*, Jan. and Feb., 1874.

Etiology and prophylaxis of diphtheria. GIACCHI. *Sperimentale*, March, 1874.

PATHOLOGY AND PRACTICE OF MEDICINE.

Curiosities of cough. L. ELSBERG. *Phila. Med. Times*, 116, 122.

Myelogenic leukæmia. H. C. HAND. *Ibid.*

Abscess of the brain following variola. J. H. RIGGER. *The Kansas City Med. Jour.*, March, 1874.

A case of disease of the aortic valves. JOS. D. LOMAX. *The Med. and Surg. Reporter*, 890.

Embolism of the arteries of the extremities. S. B. WARD. *N. Y. Med. Jour.*, March, 1874.

Embolus in left middle cerebral artery. G. H. LYMAN. *The Boston Med. and Surg. Jour.*, March 26, 1874.

Igneous agency in the production of disease. DUFF CHILD. *The Rich. and Louis. Med. Jour.*, March, 1874.

Myelitis. WALTER HAY. *The Chicago Med. Jour.*, April, 1874.

Paraplegia from peripheral irritation. G. W. STEWARD. *Ibid.*

Hereditary neuroses spasmodica. C. H. HUGHES. *The St. Louis Med. and Surg. Jour.*, April, 1874.

Scrofula and struma. J. H. BEECH. *The Detroit Review of Med. and Phar.*, April, 1874.

Mixed type in fever. F. K. BAILEY. *The Med. and Surg. Reporter*, 892.

Cerebral origin of thoracic disease. S. RHOADES. *Ibid.*

What pus is not. LESTER CURTIS. *The Med. Examiner*, April 1, 1874.

Empyema. J. B. ROOD. *Ibid.*

Alimentation in disease. A. G. FIELD. *The Northwestern Med. and Surg. Jour.*, April, 1874.

Analysis for strychnia in case of suspected murder. H. C. HAND & C. H. BOARDMAN. *Ibid.*

Phosphatic deposits and their relations to albuminuria. T. O. SUMMERS. *Nash. Jour. of Med. and Surg.*, March, 1874.

Hemorrhagic icteroid fever. B. F. HUMPHREYS. *Ibid.*

Progressive muscular atrophy. P. G. ROBINSON. *Mo. Clin. Rec.*, April, 1874.

Multiple cerebro-spinal sclerosis. J. K. BANDNY. *Ibid.*

Yellow-fever epidemic in Memphis in 1873. J. B. MALLORY. *The Am. Jour. of the Med. Sci.*, April, 1874.

Constitutional hemorrhage. WM. M. HOLTARS. *Ibid.*

Cases of nervous disease. GEO. M. BEARD. *N. Y. Med. Jour.*, April.

Remarks on a case of Hodgkin's disease. W. H. TRIPLETT. *The Rich. and Louis. Med. Jour.*, April, 1874.

Dislocated liver. J. K. DALE. *Ibid.*

Sir A. Cooper's specific in acute catarrh, etc. M. MARSH. *The Med. and Surg. Reporter*, 888.

Treatment of pneumonia (continued). HERMANN. *Allg. Wien. Med. Zeitung*, 4, 5, 1874.

The theory of meteorism. OPPOLZER. *Ibid.*, 5, 1874.

Pumping out intestinal gases in excessive meteorism. FINGER. *Ibid.*, 8, 1874.

The introduction of large quantities of water into the intestinal canal. *Ibid.*, 9, 10, 11, 12. 1874.

Case of cancer of the stomach. FRIEDREICH. *Berl. klin. Woch.*, 1, 1874.

Laryngitis hemorrhagica. FRÄNKEL. *Berl. klin. Woch.*, 2, 1874.

Influence of excessive and prolonged diarrhœa on the origin of peritoneal adhesion, with remarks on pleuritic adhesions. TRAUBE. *Berl. klin. Woch.*, 4, 1874.

Introduction of fluids into the intestine and bladder. (concluded.) HEGAR. *Ibid.*, 7, 1874.

On Gerhardt's variation in the percussion tone. WEIL. *Ibid.*

Cases of heart wounds. STEUDENER. *Ibid.*

Case of abdominal aneurism. KULISCHER. *Berl. klin. Woch.*, 8, 9, 1874.

Case of acute purulent mediastinitis in the course of an abdominal typhus. FRAENTZEL. *Ibid.*, 9, 1874.

Chronic peritonitis. HENOCH. *Berl. klin. Woch.*, 10, 1874.

A new way to diminish enlarged glands by the use of the galvanic current. MEYER. *Berl. klin. Woch.*, 10, 1874.

Case of embolism from accumulations of a parasitic nature. BURKART. *Ibid.*, 13, 1874.

On the origin of œdema. ROTT. *Ibid.*, 9, 1874.

Experiments on decomposition and the organisms in decomposition. PASCHUTIN. *Virchow's Archiv*, Feb., 1874.

The form of the disease-producing bacteria. ORTH. *Ibid.*, Feb., 1874.

Heart sounds plainly heard at a distance. G. B. *Memorabilien*, 11, 1873.

Volvulus—manual rupture of a false ligament—recovery. BETZ. *Ibid.*

Paracentesis of the abdomen. METTENHEIMER. *Ibid.*, 12, 1873.

Cholera and its treatment. FRANZ. *Memorabilien*, 1, 1874.

On the changes in the muscles in typhus. WAGENER. *Arch. f. Micr. Anat.*, 3, 1874.

Contribution to sea-sickness. HESSE. *Arch. f. Heilkunde*, 2, 1874.

Epithelioid alveolar sarcoma of the lymphatic glands in the neck. ZAHN. *Ibid.*

The cholera in Heilbronn and Frankenbach. HÖRING. *Med. Corr. Blatt*, 5, 6, 1874.

Cases of movable kidney. KLÜPFEL. *Med. Corr. Blatt*, 8, 9, 1874.

SURGERY.

A case of rhinoplastic operation, performed for the restoration of the apex of the nose, etc. GURDON BUCK. *The Boston Med. and Surg. Jour.*, Jan. 15, 1874.

Paracentesis abdominis. F. GORDON MORRILL. *Ibid.*

A case of pyæmia following a wound of the femoral artery and amputation. PETER PINEO. *Ibid.* March 19, 1874.

Acute periostitis of the occiput and upper cervical vertebræ. GEORGE ATWOOD. *Ibidem.*

Operation on fistula in ano with the elastic ligature. H. S. SCHELL. *Ibid.*, 122.

Skin-grafting. R. J. LEVIS. *Ibid.*, 125.

Hydrocele and hydrosarcocele. A. GIVEN. *The Med. Examiner*, March 15, 1874.

Tumor of soft palate. CLINTON WAGNER. *N. Y. Med. Jour.*, March, 1874.

Congenital curvature of the penis, hypospadias, etc. operation. R. F. WEIR. *Ibid.*

Skin-grafting. H. H. TOLAND. *The West. Lancet*, March, 1874.

Interesting case of wound of the hand. W. P. RANDALL. *Ibid.*

Dislocations of the hip. Sciatic variety. O. H. ALLIS. *Phila. Med. Times*, 126.

Papillomatous growths in larynx of child. R. M. BERTOLET. *Ibid.*

Treatment of epistaxis. ELLIOTT RICHARDSON. *Ibid.*

Description of specimens from Dr. Levis's case of aneurism of the subclavian, treated by introduction of horse-hairs. M. LONGSTRETH. *Ibid.*

Dislocations of shoulder and reduction by manipulation. J. W. HAMILTON. *The Cin. Lancet and Observer*, April, 1874.

Fracture treated by Wood's Hammock splint. J. W. SOUTHWORTH. *Ibid.*

Dislocation of the hip-joint by muscular action. C. D. HOMANS. *The Boston Med. and Sur. Jour.*, April 2.

Fetid coryza. COHEN. *Phila. Med. Times*, 127.

Restraint of hemorrhage during operations in the mouth. E. ANDREWS. *The Med. Exam.*, April 1, 1874.

Tractile method of reducing strangulated hernia. DAN. LEASURE. *The Am. Jour. of the Med. Sci.*, April, 1874.

Two new modifications of the Nélaton catheter. GEO. COWAN. *Ibid.*

Suspension in treatment of fractures of the leg. Wood-cuts. J. H. PACKARD. *Ibid.*

Urethrotomy, etc. F. N. OTIS. *N. Y. Med. Jour.*, April, 1874.

A novel disease of the penis. W. H. VAN BUREN and E. L. KEYES. *Ibid.*

Double diapragmatic rupture and hernia. J. M. WOODWORTH. *Ibid.*

Esmarch's operation, with cases. PAUL EVE. *The Rich. and Louis. Med. Jour.*, April, 1874.

Lumbar hernia. W. N. CAMPBELL. *The Med. and Surg. Reporter*, 888.

Removal of an extensive cancer of the tongue by incision through the supra-hyoid region. (Woodcut). BILLROTH. *Archiv f. klin. Chir.*, xvi. i., 1874.

Gunshot wounds produced by the Chassepôt rifle at short distances. BUSCH. *Ibid.*

Some very common omissions in the statistics of military surgery. RICHTER. *Ibid.*

Extirpation of a kidney for calculus. SIMON. *Ibid.*

Spontaneous luxations and some other affections of joints in abdominal typhus. GÜTERBOCK. *Ibid.*

Perforation of the œsophagus by foreign bodies. BUSCH. *Ibid.*

Radical treatment in hypertrophy of the prostate. HEINE. *Ibid.*

Modern methods of treating wounds. EMMERT. *Ibid.*

Galvano-caustic amputation of limbs. BRUNS. *Ibid.*

Observations on micrococcal embolism of internal organs, and the consequent changes in the walls of the vessels. MARTINI. *Ibid.*

Observations on external urethrotomy. GÜTERBOCK. *Ibid.*

Minute anatomical changes in some tumors of the scrotum. STEINER. *Ibid.*

Cases of subcutaneous rupture of muscles and tendons. UHDE. *Ibid.*

On traumatic supracotyloid luxation of the femur. BLASIUS. *Ibid.*

New growths on the umbilicus of adults, and the treatment of them by operation. KUESTER. *Ibid.*

Examination of anatomical relations in three successful cases of excised joints. WEICHSELBAUM. *Ibid.*

Gunshot wounds of the hip-joint. LANGENBECK. *Ibid.*, xvi., 2.

Final results of joints resected in military service. LANGENBECK. *Ibid.*

Malignant pustule in men. BARTELS. *Ibid.*

Case of myopachynsis lipomatosa (Griesinger's muscular hypertrophy) successfully treated by tenotomy. UHDE. *Ibid.*

Three cases of malformed limbs. MOSENGEIL. *Ibid.*

Luxation of the head of the humerus and fracture at the anatomical neck—reduction, with final good result. *Ibid.*

Method of fixing the foot in a forced position when the plaster-of-Paris dressing is used. *Ibid.*

Tracheotomy. BOSE. *Ibid.*

Two cases of the high operation for stone in children six and eight years old. Recovery. BETZ. *Memorabilien*. 12, 1873.

Symptomatic bronchocele of tuberculosis. *Ibid.*

Treatment of ranula. BETZ. *Ibid.*

Stricture of the larynx following poisoning by sulphuric acid. FIEBER. *Allg. Wien. Med. Ztg.*, 8, 1874.

Abscess of the popliteal bursa, with contracture of the knee. Recovery. WOLFENSTEIN. *Ibid.*, 8, 1874.

Report on cases of lithotrity in practice. IVÁNCHICH. *Ibid.*, 10, 1874.

Endoscopic examination of the urethra and bladder. GRÜNFELD. *Ibid.*, 11, 1874.

Successful case of direct arterial transfusion of sheep's blood. SCHLIEP. *Berl. klin. Woch.*, 3, 1874.

Colpocystotomy. KARPNISKI. *Berl. klin. Woch.*, 4, 1874.

Some cases of tetanus. SCHULTZE. *Berl. klin. Woch.*, 8, 1874.

Resection of the wrist following wounds. KÜSTER. *Ibid.*

Remarks on the transfusion of lamb's blood and the apparatus of Schleip. HASSE. *Ibid.*

On the removal of permanent dressings (plaster-of-Paris, etc.). SCHINZINGER. *Berl. klin. Woch.*, 9, 1874.

Epidermic grafts and transplantation of skin, with successful results. OCCHINI. *Sperimentale*, Feb., 1874.

Traumatic tetanus cured by chloral. BENSASSON. *Ibid.*

Genesis and metamorphosis of the giant-celled sarcomata of bones. DURANTE. *Arch. d. Med. Chir. ed Igiene*, Jan., 1874.

Paracentesis in pleuritic exudations. COLASTRI. *Gaz. Med. Ital. Lombard.*, Jan., 1874.

Ligation of the right internal iliac artery for fungus hæmatodes of the sacro-iliac symphysis. OPPIZZI. *Gaz. Med. Ital. Lombard.*, Jan., 1874.

Treatment of hæmorrhoids by cauterization with nitric acid. BERRUTI. *L'Independente*, Jan., 1874.

Electricity in the treatment of chilblains. MOLINARI. *Ibid.*

Ligation of the profunda. CASELLI. *Bull. del Sci. Med.*, Dec., 1873.

Amputation of the tongue. *Ibid.*

Four cases of hernia inguinalis congenita incarcerata. MEYER. *Hospitals Tidende*, 8, 1874.

Successful removal of a large sarcoma from the neck. BOTTINI. *Giorn. del R. Acc. di Med.*, Jan. and Feb., 1874.

New method of treating vesical catarrh. VIRGIN. *Hospitals Tidende*, 9, 1874.

Sub-pubic hernia. PACI. *Sperimentale*, March, 1874.

Clinical contribution to the transfusion of blood. TASSINARI. *Bull. del Sci. Med.*, Jan., 1874.

SYPHILOGRAPHY AND DERMATOLOGY.

Report of small-pox cases among the employés of the Imperial Austrian railways for the year 1873. KELLER. *Allg. Wien. Med. Zeitung*, 5, 6, 1874.

Infection with herpes from a cat having herpes and scabies. MICHELSON. *Berl. klin. Woch.*, 11, 12, 1874.

Contributions to the pathological anatomy of elephantiasis. SCHLIZ. *Archiv d. Heilkunde*, 2, 1874.

Two cases of necrotic enteritis in morbus maculosus Werlhofii. ZIMMERMANN. *Ibid.*

Contribution to the statistics of small-pox and the vaccination question. MUELLER. *Ibid.*

The proper time to commence the general treatment of syphilis and the selection of the method of treatment. SIGMUND. *Giorn. Ital. del. Mal. Vener.*, Feb. 1874.

Chronological development of syphilis. PROFETA. *Sperimentale*, March, 1874.

The origin of the syphilides. PROFETA. *L'osservatore Med.*, Dec., 1873.

Molluscum sebaceum of scrotum. Z. T. DANIEL. *The Rich. and Louis. Med. Jour.*, March, 1874.

Ingrowing toe-nail. G. Q. A. HUDSON. *The Southern Med. Rec.*, March, 1874.

Cutaneous neuroses. J. W. SOUTHWORTH. *The Detroit Rev. of Med. and Pharm.*, April, 1874.

Syphilis. J. J. MULHERON. *The Penin. Jour. of Med.*, April, 1874.

OPHTHALMOLOGY AND OTOLOGY.

Embolism of the central artery of the retina. PINTSCHOVIUS. *Allg. Med. Central-Zeitung*, 16, 1874.

Wounds of sclerotic successfully united by the suture. POOLEY. *Allg. Wien. Med. Zeitung*, 8, 9, 1874.

Case of glioma retinæ. LINDNER. *Allg. Wien. Med. Zeitung*, 12, 1874.

Foreign bodies in the interior of the eye. HIRSCHBERG. *Berl. klin. Woch.*, 5, 1874.

Remarks on traumatic keratitis and the plasticity of the corneal tissue. HAUSEN. *Virchow's Archiv*, Feb., 1874.

New-formed membranes and bands in the middle ear. WENDT. *Archiv f. Heilkunde*, 2, 1874.

The "Politzer-Kessel Corpuscles." *Ibid.*

Various operative methods in entropion. VACCÀ. *Bull. del Sci. Med.*, Dec., 1873.

Action of muscarine on the pupil and accommodation. VALDEMAR KRENCHEL. *Hospitals Tidende*, 10, 1874.

Clinical history of orbital tumors. VALERIANI. *L'osservatore Torino*, Jan., 1874.

Corneal wart. C. A. ROBERTSON. *Phila. Med. Times*, 122.

Diseases of the lachrymal apparatus. L. L. LAMBERT. *The Med. Examiner*, March 15, 1874.

Injuries of the eye by penetrating foreign bodies. (Continued.) S. C. AYRES. *The Cin. Lancet and Observ.*, April, 1874.

The resonant functions of the external ear. C. H. BURNETT. *Phila. Med. Times*, 127.

Injection of liquid remedies into the cavity of the tympanum. C. A. TODD. *Mo. Clin. Rec.*, vol. i., 1.

Embolism. ED. G. LORING. Wood-cuts. *The Am. Jour. of the Med. Sciences*, April, 1874.

Neuroparalytic ophthalmia. GEO. C. HARLAN. *Ibid.*

Operation for artificial pupil and extraction of lens couched 16 years before. J. THOMPSON. *Ibid.*

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Pelvic cellulitis. GOSCHLER. *Allg. Wien. Med. Zeitung*, 5, 6, 7, 8, 1874.

The question of criminal abortion. FRIEDBERG. *Ibid.*, 7, 1874.

Presentation of the shoulder and left arm. SLUGER. *Ibid.*, 8, 1874.

Pyometra and pyokolpos lateralis in consequence of atresia of a rudimentary vagina. BRAUS. *Berl. klin. Woch.*, 10, 11, 1874.

Bright's disease in infancy. SCHMITT. *Memorabilien*, 12, 1873.

On the double suture in the operation for ruptured perineum. VALENTA. *Memorabilien*, 11, 1874.

Cases of children's diseases. KERSCH. *Ibid.*

Rare case of a spotted child. NEUSSELL. *Allg. Med. Central Zeitung*, 22, 1874.

Thermometry applied to the diagnosis of the life or death of the fœtus in utero. VIANI. *Bull. del. Sci. Med.*, Dec., 1873.

Case of uterine hæmatocele. VILLARECCHIA. *Giorn. del. R. Acc. di Med.*, Jan. and Feb., 1874.

Ten ovariotomies—3 deaths—7 recoveries. NETZEL. *Hygeia*, Stockholm, 9, 1874.

Tetanus neonatorum and the hydrate of chloral. GIUNTOLI. *Ann. di Chim. del Pol'i.*

Theoretical and practical studies on the cervix uteri. MACARI. *Lo Spallanzani*, Jan., 1874.

Treatment of puerperal metrorrhagia. GIUNTOLI. *L'Imparziale*, Jan., 1874.

Nocturnal enuresis and the hydrate of chloral. VECCHIETTI. *L'Imparziale*, Jan., 1874.

A remarkable recovery from abdominal section. DAVID W. CHEEVER. *The Bost. Med. and Surg. Jour.*, xc., 8.

Management of the placenta in abortion. W. A. HARVEY. *The Bost. Med. and Surg. Jour.*, March 19, 1874.

A remarkable double monstrosity. D. M. ELWOOD. *The Med. and Surg. Reporter*, 890.

Case of acephalous monster. F. W. SHIRRIFF. *Can. Med. and Surg. Jour.*, March, 1874.

Epilepsy in the puerperal state. JOHN BELL. *Ibid.*

General considerations upon uterine pathology. T. G. THOMAS. *N. Y. Med. Jour.*, March, 1874.

Treatment of difficult labors. C. S. HASWELL. *Pac. Med. and Sur. Jour.*, March, 1874.

Use and abuse of the forceps. J. F. SULLIVAN. *The Clinic*, March 21, 1874.

Puerperal eclampsia treated by chloral hydrat. B. DABNEY. *The Rich. and Louis. Med. Jour.*, March, 1874.

Puerperal insanity. J. B. STONEHOUSE. *The Am. Practitioner*, April, 1874.

Case of monstrosity. F. E. ENGLISH. *The Chicago Med. Jour.*, April, 1874.

A new theory of placenta prævia. J. P. CHESNEY. *The St. Louis Med. and Surg. Jour.*, April, 1874.

Average weight of children at birth. J. H. BOOTH. *The South. Med. Rec.*, March, 1874.

Of a late epidemic of childbed fever, etc. (Continued.) T. C. MINOR. *The Cin. Lancet and Observ.*, April, 1874.

Ovulation and menstruation. EMIL HENKE. *The Med. and Surg. Reporter*, 892.

Case of uterus bicornis. A. N. BLODGETT. *The Bost. Med. and Surg. Jour.*, April 2, 1874.

Case of extra-uterine pregnancy. GEORGE STILES. *Phila. Med. Times*, 127.

Case of uterine cancer. D. FORBES and S. K. WHITSON. *Nash. Jour. of Med. and Surg.*, March, 1874.

Acute desquamative nephritis at sixth month of gestation, etc. Fatty degeneration of placenta. JOHN REDDY. *Can. Med. and Surg. Jour.*, April.

Cases in ovariotomy. J. HOMANS. *The Bost. Med. and Surg. Jour.*, April 9, 1874.

Cases in obstetric practice. E. E. GRAVES. *Ibid.*

Record of three hundred obstetrical cases. WM. M. FINDLEY. *The Am. Jour. of the Med. Sciences*, April, 1874.

Premature delivery, extremely small children, etc. A. B. ISHAM. *Ibid.*

Milk sickness. L. B. JOHNSON. *The Rich. and Louis. Med. Jour.*, April, 1874.

Puerperal peritonitis and its treatment. BEDFORD BROWN. *The Med. and Surg. Reporter*, 893.

MISCELLANEOUS.

The photo-endoscope. STEIN. *Berl. klin. Woch.*, 3, 1874.

Pneumatic double apparatus for the mechanical treatment of respiratory diseases. VON CUBE. *Ibid.*, 4, 1874.

Remarks on the portable pneumatic apparatus. WALDENBERG. *Ibid.*

A new trocar for the removal of pleuritic exudations. FRÆNTZEL. *Berl. Klin. Woch.*, 12, 1874.

Appeal for the practice of hygiene. P. NIEMEYER. *Memorabilien*, 1, 1874.

Introduction of mortality statistics. SACHS. *Deutsch. Vierteljahrs. f. Offentl. Gesundheitspfl.*, 4, 1873.

Canalization in Basle. GÖTTISHEIM. *Ibid.*

On employing the refuse lime of the ammonia and soda factories. MÜLLER. *Ibid.*

Hospital trains made up of freight cars. SCHMIDT. *Ibid.*

New experiences with the Beurle steam-boiler. FRÖLICH. *Ibid.*

Aniline factories. GÖTTISHEIM. *Ibid.*

Studies on the Rhizopods. SCHULTZE. *Archiv f. Microsc. Anat.*, 3, 1874.

An apparatus for directing the hand of the blind in writing. REYMOND. *Gaz. Clin. d. Palermo*, Dec., 1873.

Deaths by fire and lightning. ZILIOTTO. *Giorn. Ven. di Scien. Med.*, Jan., 1874.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from April 19, 1874, to May 4, 1874.

BAILEY, J. C., Surgeon.—Assigned to duty at Frankfort, Ky. S. O. 61, Department of the South, April 20, 1874.

MCCLELLAN, ELY, Assistant Surgeon.—To carry out provisions of joint resolution of Congress, approved March 25, 1874, on the recommendation of the Surgeon-General, detailed to inquire into and report upon the causes of epidemic cholera. S. O. 85, A. G. O., April 18, 1874; and by S. O. 67, Department of the South, April 30, 1874, relieved from duty at the Post of Lebanon, Ky.

GARDNER, WM. H., Assistant Surgeon.—Assigned to duty as Post Surgeon at Fort Union, N. M. S. O. 32, District of New Mexico, April 14, 1874.

MIDDLETON, P., Assistant Surgeon.—When relieved by Surgeon Baily, to comply with S. O. 78, c. s., War Department. S. O. 61, c. s., Department of the South.

LIPPINCOTT, H., Assistant Surgeon.—Assigned to duty as Post Surgeon at Fort Whipple, A. T. S. O. 35, Department of Arizona, April 9, 1874.

DEWITT, CALVIN, Assistant Surgeon.—Assigned to duty at Humboldt, Tenn. S. O. 61, c. s., Department of the South.

GIRARD, A. C., Assistant Surgeon.—Relieved from duty in the Department of the South, and assigned to duty at the U. S. Military Academy, West Point, N. Y.; so much of S. O. 79, c. s., A. G. O., as grants him four months' sick leave having been revoked. S. O. 90, A. G. O., April 25, 1874.

GIRARD, J. B., Assistant Surgeon.—Assigned to duty as Post Surgeon, at Camp Lowell, A. T. S. O. 35, c. s., Department of Arizona.

POPE, B. F., Assistant Surgeon.—When relieved by Assistant Surgeon DeWitt, to comply with S. O. 78, c. s., A. G. O. S. O. 61, c. s., Department of the South.

FITZGERALD, J. A., Assistant Surgeon.—Relieved from duty at the U. S. Military Academy, and to report in person to the Commanding Officer, Department of the Columbia, for assignment to duty. S. O. 90, c. s., A. G. O.

MOFFAT, P., Assistant Surgeon.—Assigned to duty at Fort Garland, C. T. S. O. 32, c. s., District of New Mexico.

Medical Items and News.

AMERICAN MEDICAL ASSOCIATION.—The undersigned has been appointed a committee to procure reduced fares for those attending the meeting of the American Medical Association. The fare from New York to Detroit is now $16.25. If a sufficient number of gentlemen participate, it is hoped a reduction may be procured of probably $22, to Detroit and return, by Erie and Great Western R. R., via Niagara Falls. Palace and sleeping cars extra. The trip is made in about 25 hours, without change of cars. Gentlemen who wish to avail themselves of the above privileges will please notify the undersigned at once how many tickets they desire, in order to enable him to make the most favorable terms. An answer, with particulars and results, will be forwarded in proper time.

ROBERT NEWMAN, M.D.
145 West 47th St., New York.

DR. F. MARKOE WRIGHT.—At the annual meeting of the District Medical Society of Bergen County, N. J., the following preamble and resolutions were offered by the retiring President, Dr. Currie, and unanimously adopted:

Whereas, It has pleased Almighty God to remove from this world our President and friend, F. Markoe Wright, M.D.; while bowing humbly to this dispensation of an All-wise Providence, we, who shared his toils and witnessed his devotion to the exalted duties of his self-sacrificing profession, may be permitted to give some public expression to the feelings which so sad an event cannot fail to excite; therefore,

Resolved, That in the death of Dr. Wright, this Society has lost an able and prominent member, the community a highly esteemed and gentlemanly physician, and a devout Christian.

Resolved, That during his professional career he distinguished himself by a blameless life, an honorable character, genial sympathies, reverence for truth, and respect for the rights of others; and in his jealous watchfulness over professional purity and honor, he left us an example worthy of imitation.

Resolved, That to his bereaved relations we tender our heartfelt sympathy, invoking for them Heaven's choicest consolations, and assuring them that we shall ever cherish in our hearts pleasant memories of his life.

JOHN H. GRISCOM, M.D., who died suddenly on the morning of Tuesday, the 28th *ultimo*, was born Aug. 14, 1809, in this city, and was the son of John Griscom, LL.D., who was well known years ago as Professor of Chemistry in Rutgers Medical College, New Jersey. Dr. Griscom studied medicine with Prof. J. D. Goodman and Valentine Mott, at Rutgers Medical College, but was graduated from the University of Pennsylvania in 1832. The following year he was appointed Assistant-Physician of the New York Dispensary, of which he became Physician in 1834. From 1836 to 1840 he was Professor of Chemistry in the New York College of Pharmacy, and in 1842 he was appointed City Inspector, which position he held one year, when he became Visiting-Physician of New York Hospital, in which service he continued until a few years since. From 1848 to 1851 he was General Agent of the Commissioners of Emigration. Dr. Griscom was the author of a large number of medical books and essays, the most prominent of which were the following: "Animal Mechanism and Physiology," "The Sanitary Condition of the Laboring Classes of New York," and "The Uses and Abuses of Air and the Means of the Ventilation of Buildings." He was a strict adherent of the Society of Friends. During the

past few years he has been unable to practise, but in his long public life he gained an excellent professional reputation, and made many friends.

ARCHIVES DE TOCOLOGIE is the name of a new monthly started in Paris, and devoted to the diseases of women and infants. It is published by Professor Depaul, with the assistance of Doctors Bailly, Bernutz, Blot, Charpentier, Guéniot, Hervieux, and of Sayre, Editorial Secretary. Each number consists of sixty-four pages, and the subscription price is, for Paris, eighteen francs.

A NEW GERMAN JOURNAL.—Another weekly periodical is about to be added to the list of excellent publications of this sort in Germany. It is to be called the *Centralblatt für Chirurgie*. It is to be published at Leipsig, under the editorship of Drs. Lesser, Schede, and Tillmanns, and the first number commenced with April 1st. It will give an epitome of surgical literature at home and abroad, and will also, like its analogues, contain short original articles.

IDENTIFICATION OF THE REMAINS OF THE LATE DR. LIVINGSTONE.—Sir William Fergusson, with several other gentlemen, made an examination, on the 14th of April, of the remains of the body brought to London from Central Africa, and purporting to be those of Dr. Livingstone. The question of identity rested upon the existence of an ununited fracture of the humerus, caused by the bite of a lion. Mr. Fergusson writes in *The Lancet* of April 18th, from which we make an extract:—

"From what I have seen I am much impressed with the ingenious manner in which those who have contrived to secure that the body should be carried through the long distance from where Livingstone died until it could reach a place where transit was comparatively easy, accomplished their task. The lower limbs were so severed from the trunk that the length of bulk of package was reduced to a little over four feet. The soft tissues seem to have been removed to a great extent from the bones, and these latter were so disposed that, by doubling and otherwise, the shortening was accomplished. The abdominal viscera were absent, and so were those of the chest, including, of course, heart and lungs. There had been made a large opening in front of the abdomen, and through that the native operators had ingeniously contrived to remove the contents of the chest as well as of the abdomen. The skin over the chest, sternum, and ribs had been left untouched.

"Before these points had been clearly ascertained, some coarse tapes had to be loosened, which set free some rough linen material—a striped, colored bit of cotton cloth, such as might have been an attractive material for the natives among whom Livingstone travelled—a coarse cotton shirt, which doubtless belonged to the traveller's scanty wardrobe, and in particular a large portion of the bark of a tree, which had formed the principal part of the package—the case thereof, no doubt. The skin of the trunk, from the pelvis to the crown of the head, had been untouched. Everywhere was that shrivelling which might have been expected after salting, baking in the sun, and eleven months of time. The features of the face could not be recognized. The hair on the scalp was plentiful and much longer than he wore it when last in England. A moustache could not be recognized, but whiskers were in abundance. The forehead was in shape such as we are familiar with from memory, and from the pictures and busts now extant. The circumference of the cranium, from the occiput to the brow, was 23⅞ inches, which was recognized by some present to be in accordance with such measurements when alive.

"In particular the arms attracted attention. They lay as if placed in ordinary fashion, each down by the side. The skin and tissues under were, on each side, shrunk almost to skeleton bulk, and at a glance, to practised eyes—there were five, I may say six, professional men present—the state of the left arm was such as to convince every one present, who had examined it during life, that the limb was Livingstone's. Exactly in the region of the attachment of the deltoid to the humerus, there were the indications of an oblique fracture. On moving the arm there were the indications of an ununited fracture. A closer investigation and dissection displayed the false joint which had long ago been recognized by those who had examined the arm in former days. The Rev. Dr. Moffat, and in particular Dr. Kirk, late of Zanzibar, and Dr. Loudon, of Hamilton, in Scotland, at once recognized the condition. Having myself been consulted regarding the state of the limb, when Livingstone was last in London, I was convinced that the remains of the great traveller lay before us. Thousands of heads with a like large circumference might have been under similar scrutiny; the skeletons of hundreds of thousands might have been so; the humerus in each might have been perfect; if one or both had been broken during life, it would have united again in such a manner that a tyro could easily have detected the peculiarity. The condition of ununited fracture in this locality is exceedingly rare. I say this from my personal professional experience, and that such a specimen should have turned up in London from the centre of Africa, excepting in the body of Dr. Livingstone, where it was known by competent authorities to have existed, is beyond human credibility. It must not be supposed by those who are not professionally acquainted with this kind of lesion—which often causes so much interest to the practical surgeon—that a fracture and new joint of the kind now referred to could have been of recent date or made for a purpose. There were in reality all the indications which an experienced pathologist recognizes as infallible, such as the attenuated condition of the two great fragments (common under such circumstances), and the semblance of a new joint, but actually there was a small fragment detached from the others, which bore out Livingstone's own view, that the bones had been 'crunched into splinters.'"

KINGS COUNTY MEDICAL SOCIETY.—On page 154, second column, fourth line, before the words, "The question has been asked," the name of Dr. H. Fearn should be introduced as the author of the remarks on the Veratrum Viride Treatment of Puerperal Eclampsia.

New Publications.

BOOKS RECEIVED.

THE PRINCIPLES OF CHEMISTRY AND MOLECULAR MECHANICS. By GUSTAVUS HINRICHS, Prof. Physical Science, State University, Iowa. Davenport: Day, Egbert & Fidlar. N. Y.: B. Westermann & Co.

LIGATION OF ARTERIES. By Dr. L. H. FARABEUF. Translated by JOHN D. JACKSON, M.D., Danville, Ky. Phila.: J. P. Lippincott & Co. 1874.

TREATMENT OF NERVOUS AND RHEUMATIC AFFECTIONS BY STATIC ELECTRICITY. By Dr. A. ARTHIUS. Translated by J. H. ETHERIDGE, M.D., Prof. Gen. Therapeutics, Rush Med. Coll. Chicago: W. B. Keen, Cooke & Co. 1874.

THE PSYCHOLOGY OF SCEPTICISM AND PHENOMENALISM. By JAMES ANDREWS. Glasgow: James Maclehose. 1874.

Medical Department of Life Insurance.

HYGIENE TO BE CONSIDERED BY LIFE INSURANCE MEDICAL EXAMINERS.

By A. H. SALISBURY, M.D.,

MINNEAPOLIS, MINN.

It is for the interest of all concerned that none but the best lives should be insured. It is plainly advantageous for the company, as the losses will be thereby lessened. It is equally for the interest of the policy-holder, as the cost of insuring will thus be reduced and the stability of the company guaranteed. To accomplish this end medical examiners are appointed, and printed questions are furnished to guide them in their investigations. These questions are very useful to the physician, systematizing and facilitating his labor, but they do not always afford him *all* the data required for giving a correct opinion.

Unless he has made it the subject of particular study, he is too apt to base his conclusion solely upon the answers to printed questions, and give too little attention to hygienic considerations. It would doubtless be impracticable to obtain from the applicant categorical answers to such interrogatories as these:

In what kind of house does the person live?

Is it clean and well ventilated, or otherwise?

Is there any stagnant water near, and is the drainage good?

Is it shaded or open to the sun?

In what condition is the privy or water-closet, and how situated?

Is the person cleanly in his habits, or otherwise?

How often does he bathe, if ever?

Is his clothing suitable to the climate and season?

From what source is he supplied with water?

Does he take proper exercise?

What is his dietary?

Is he intelligent or stupid, educated or ignorant?

Does he employ a regular physician or a quack?

To inquire into a man's private life after this style would, no doubt, be considered impertinent; nevertheless, the information so obtained would have an important bearing upon the question which the physician is required to decide. If a person, upon examination, is found to have an unfavorable family history, both parents consumptive for instance, he is rejected, although at the time he may be the personification of robust health.

Is there not equally good reason for refusing the man who lives over a mass of decaying vegetables in his cellar, or who uses water from a well which receives the drainage from a privy or stable?

The latter is as much *predisposed* to typhoid fever as the former is to phthisis. The man who habitually exposes himself to the inclemency of the weather without proper protection, is almost as poor a risk as the one whose heart is already enlarged. The probability is, that next winter or spring he will have an attack of inflammatory rheumatism or pneumonia, and succumb either to the acute disease or some of the sequelæ. The applicant for insurance who sleeps in an eight-by-ten bedroom, with his wife and three or four children, and has it hermetically sealed to keep out the cold, may have no hereditary taint, but by and by he will get a cough, neglect it, and eventually die of tuberculosis; while his intelligent neighbor, who was rejected because his mother was consumptive, understands and obeys the laws of health, breathes pure air, never neglects a cold, and lives hale and hearty to a good old age.

The case of the intemperate eater should be as carefully considered as that of the intemperate drinker. Indeed it is questionable whether imprudence in eating does not shorten the average duration of life more than the immoderate use of stimulants. In cities, especially, it is very necessary to know the condition of the sewers and drains, and whether the streets are clean or filthy. So much has life been lengthened in modern times, by reform in this respect, that no other proof is needed of its importance. Even the direction of the street has its influence on longevity. Every physician can testify that the streets so situated that the sun, the best antiseptic we have, cannot shine into the houses, are the streets where he is most frequently called. Of course every one who violates the laws of health should not be refused assurance; but, on the other hand, if more heed were given to hygiene in issuing policies, many unprofitable risks would not be taken, while others might be accepted, which, though not the best, are rendered equal to the average by the intelligent life of the applicant.

HEALTH OF OPERATIVES WHO ARE EXPOSED TO CERTAIN KINDS OF DUST.

By DR. GOTTLIEB MERKEL.

(Translated from the German.)

The kinds of dust referred to below have never been demonstrated to be present in the tissue of the lungs, but the prevalence of certain affections of the lungs* among those habitually exposed to this dust justifies us in considering it as in a great measure the cause of these affections.

First among these varieties should be mentioned *wood dust*. The molecules of this dust are of varying hardness and form, and under certain circumstances are present in enormous quantities in the air.

The classes of persons most exposed to this dust are the joiners, whose average duration of life, according to all authors, is not quite 50 years; the toy-makers; the carpenters; the wheelwrights; the turners in wood, and those employed in saw-mills. Among the latter, special mention should be made of those who work in lead-pencil manufactories, particularly those who are employed in the rooms where the cedar boards are sawed, and where the grooves for the lead are planed out in the handles. The dust is very abundant and dense in these places, and, according to our observations, consumption is a frequent disease among the workmen. We are not able, however, to furnish statistics on this point.

The following table, which has been prepared by Dr. Ludwig Hirt, gives the relative frequency of pulmonary affections among workers in wood.

Out of 100 sick workmen there were:

	With Consumption.	With Chronic Bronchitis.	With Emphysema.	With Pneumonia.	Average Duration of Life.	Mortality per cent.
Joiners.....	14.6	10.1	3.9	6.0	49.8	1.89
Carpenters.....	14.4	6.5	6.9	6.9	55.7	——
Wheelwrights and Carriage-makers	12.5	9.2	1.3	5.2	——	——

* The varieties of dust which have been discovered in the lung tissue receive their full share of attention in a previous portion of the essay from which the above extract has been made.—Editor.

To the same category belong the workmen employed in the chiccory, madder, dye-wood, and Peruvian bark stamping-mills. But the number of these is so small that it is impossible to draw any accurate conclusions.

The second variety under consideration is the *dust of the different kinds of grain and flour.*

It is, of course, a well-known fact that the dust which is produced during the operations of threshing, cleaning, and measuring the various kinds of grain (rye, wheat, barley, and oats), and which consists of fragments of the stalks, leaves, and chaff, together with a certain amount of earth accidentally present, produces a very irritating and injurious effect upon the organs of respiration. But the harm which it might produce is almost entirely obviated by the shortness of the time during which the workmen are exposed to the injurious influence of the dust.

On the other hand, the millers are exposed almost continuously to the irritating influences of the dust, and as a consequence they furnish a large contingent to the number of sufferers from pulmonary diseases. The inhalation of the grain and flour dust is not the only injurious element to which they are exposed: a large portion of the miller boys are kept employed for a certain length of time polishing the stones.

According to Hirt, out of 100 sick millers there will be found 42 suffering from acute or chronic affections of the lungs, namely, 10.9% with consumption; 9.3% with bronchitis; 1.5% with emphysema, and 20.3% with pneumonia. The mortality of millers is stated by the same authority as 1.7 per cent., and the average duration of life as 45.1 years.

The bakers and confectioners are somewhat more favorably situated in this respect, as they are exposed only to the flour dust.

The *dust of wool* constitutes the third variety. The fibres of wool, which under the microscope present a strong resemblance to hairs, and enter the lungs with the inbreathed air, do not seem to exert a specially injurious influence upon the health of the wool-workers. While it is true that this class of operatives does not as a rule enjoy good health—and this is especially so of the girls employed in spinning-mills—still this is in great measure to be accounted for by other injurious influences, such as the overheated condition of the spinning-rooms, in which the air is at the same time damp and filled with the fumes of oil.

The cloth-shearers are exposed to an atmosphere much more heavily laden with wool fibres. According to Hirt's observations, made in Spremberg in 1869, there were 100 sick out of a thousand cloth-shearers. Twenty-five per cent. of these were affected with diseases of the respiratory organs, namely, 7–10% with consumption, 6–8% with bronchitis, and 2–4% with emphysema. The mortality was from 1 to 1.5 per cent., and the average duration of life 57.5–59 years.

According to the reports of Sommerbrod, the women operatives upon sewing-machines suffer appreciably from the influence of wool-dust. In the shoddy manufactories, where solid masses of wool are again reduced to shreds before the material is manufactured into cloth, the operatives are also exposed to the same influences. Although the English accounts picture this occupation as one of special danger to the lungs of the operatives, nevertheless, corroborative statistics are wanting, and the experience thus far of German shoddy manufacturers does not show the occupation to be one of such decided injuriousness to health. In the manufacture of silk goods, whose fibres are extremely thin, smooth, and flexible, dust is sometimes produced, as, for instance, in the carding process. The poor health, however, which some authors mention as universal among the silkworkers, may rightly be attributed to other causes, as, for instance, their improper and dissolute mode of life—so well known as to be even a by-word. Accurate statistics on the subject are wanting.

Hair dust, which constitutes the fourth variety under consideration, consists not only of the fragments of the hairs, but also of the particles of dirt which cling to them. In the case of the hat-makers still another element has to be taken into consideration: in dressing the fur they make use of a poisonous solution, the nitrate of mercury, to destroy the roots of the hairs. Hirt reports the cases of three old horse-hair pickers, in whose lungs after death he found the lesions usually designated as *Chalicosis pulmonum* [deposit of stony particles in the lungs]. This would seem to indicate that only the particles of dirt which cling to the hairs remain behind in the lungs after the inhalation of the dust. A genuine hair or bristle dust is only to be found in the workshops of the brushmakers.

As the furriers do not beat the furs continuously, the injurious effects produced are slight and transient in character. Those hatmakers, however, whose duty it is to shear the hares' hairs, do not escape so lightly. Besides the dust generated by cutting off the projecting hairs, there is also that produced by shaking off the dried particles of nitrate of mercury, the inhalation of which calls into existence a peculiar train of symptoms, which is known under the term of "hare-clippers' disease." The description of this, however, will be given in another place. Very much the same kind of dust is generated by the process of manufacturing felt.

We possess no special knowledge concerning the feather-dressers, but it would seem, from Hirt's reports, that they too do not enjoy good health, but suffer a good deal from pulmonary affections.

We copy from Hirt's work the following facts relating to the diseases of the brushmakers and workers in hair goods:

Out of 100 sick individuals there were

	With Consumption.	With Chronic Bronchitis	With Emphysema.	With Pneumonia.	With acute Catarrh.	Average Duration of Life.	Mortality per cent.
Brushmakers.	49.1	28.0	—	7.0	12.2	?	1.6
Hair-dressers.	32.1	17.8	3.4	10.7	21.4	57.9	2.89
Saddlers.....	12.8	7.5	2.5	5.0	40.1	53.5	
Upholsterers.	25.9	11.7	2.5	10.3	24.9	?	
Furriers.....	23.2	10.7	2.7	8.1	23.3	50.5	
Hatmakers...	15.3	6.7	4.7	5.6	33.3	51.6	2.9

The dust of *horn* and *bone* constitutes the fifth variety. The ultimate particles composing this dust vary very greatly in shape and size. According to Hirt's reports, consumption is a comparatively frequent disease among the workmen in the bone manufactories. Where sawing has to be done, there is produced a very fine and dense dust; but where the bone is turned, the fragments are so large as to fall at once to the ground, and so they do little or no harm.

In this connection we might mention a case which occurred within our own observation:—

A turner in horn, 27 years of age, died of typhus fever in the City Hospital. At the post-mortem examination, the apices of all five lobes of the lungs were found to be the seat of a very marked rarefaction of the lung-tissue, and to contain unmistakable particles of horn-dust. Of course it is impossible to say whether the rarefaction of the tissue was the cause or the result of the deposit of dust. We should bear in mind, however, that all turners injure their chests more or less by the way in which they use their tools.

THE DUTIES OF THE MEDICAL OFFICER.*

By EDWARD H. SIEVEKING, M.D.,

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS; PHYSICIAN TO ST. MARY'S AND THE LOCK HOSPITALS; PHYSICIAN EXTRAORDINARY TO THE QUEEN, ETC.

The regular employment of medical men to examine candidates for life insurance is a practice of comparatively recent date. The custom of the old offices, prior to about 1820, was for each life proposing to sign a very distinct and binding declaration, to the effect that the individual had not had "cow or small-pox, or any other disease tending to shorten life." No mention seems to have been made of family history. The proposer had to give a reference to "two persons of good repute, one, if possible, of the medical profession." Parties who did not appear before the directors, or who could not refer to a medical gentleman, were required to give a reference to three persons.†

Since that time the entire aspect of life insurance business has undergone a change; and while the companies have learned to appreciate the value of skilled medical advice, the members of the medical profession have acquired a direct pecuniary interest in promoting to their utmost the great social and economic principles which underlie insurance transactions. We have tried in vain to ascertain approximately the amount of honoraria paid in this way to the medical profession; but a little reflection will teach the reader that it must be very considerable, seeing that there is scarcely a medical man in the kingdom who is not more or less often applied to for his opinion as to the value of lives for insurance.

The duties which the medical officer of an insurance company undertakes to perform are of a very responsible character, as they involve both the happiness of the applicant and the welfare of the company. The rejection of a candidate not only interferes with his plans of making provision for his family, but implies the existence of a morbid taint or of actual disease, calculated to abridge his life, which he may not have suspected, and the revelation of which is likely to create serious alarm. If the examination is carefully conducted, and facts bearing upon the prospects of the life of the individual are overlooked or falsely estimated, the office will be mulcted by having to pay a claim before it ought to become due. A refusal to pay may be justified under circumstances of serious concealment, of actual fraud or conspiracy; but juries naturally tend to the side of the claimant's representatives, unless the evidence is of a very glaring character; and owing to the odium entailed, and to the consequent loss of business, companies shrink from appearing in court, unless they can bring overwhelming proof that they are victims of deception, against which they had taken every reasonable precaution. The history of life assurance reveals many instances of gross frauds perpetrated upon life insurance companies; personation, forgery, and murder have been employed, and frequently with success;‡ these are not generally matters for the professional consideration of the medical adviser, who has to guard chiefly against attempts at concealing facts that indicate depraved habits and a tainted constitution. In examining the statements made by the applicant and by his friends, he has to exercise discrimination and judgment, so as to note any discrepancies and to seize every indication of impaired vitality, which a single personal examination often fails to show. A case recently came under our notice in which an office successfully resisted the payment of a large claim on the ground of the concealment of facts, which certainly would have prevented the acceptance of the life had they been known when the policy was taken out. A gentleman died, within a short time of effecting an insurance, at a distant continental watering-place. An accident suggested to the watchful and intelligent actuary that fraudulent representations had been made as to the deceased's previous health and habits. By following up the clue, and calling in the assistance of the detective department of the police, the deceased policy-holder was shown to have been a victim of intemperance, through which he had, not long before effecting the insurance, become the inmate of the police cell, if not the lunatic asylum; and the collected evidence proved so conclusive, that instead of the company being called upon to pay a claim of £2,000, it was mulcted only in the expenses of its inquiry. Tardieu * gives a curious illustration of the ingenuity brought to bear upon this species of fraud. A bankrupt, having assured his life in Paris, in December, 1864, for 100,000 francs, was reported soon after to have died in London, of heart disease. But it turned out that the policy-holder had registered his own death in London, attended his own obsequies, and obtained a ship and cargo on the strength of the expected insurance. Murder and suicide have also, even in modern times, played a part in insurance business. Thus, for instance, we find in the same author a case of a Swede, Hoffstedt, who was insured by a man of the name of Swinson, with the Caisse Paternelle, in France, with the understanding that Swinson was to provide the former with brandy for the purpose of drinking himself to death. The brandy was not expeditious enough, so arsenic was administered. Fortunately this was discovered, and the policy cancelled.

We shall see that the question of temperance is one of great, and, unfortunately, very frequent difficulty. People entertain very different views as to where intemperance begins, and, excepting where its effects have already left a permanent impress on the system, the indications are by no means such as to enable the medical examiner to trace its existence with certainty.

Although the necessity of a medical scrutiny into the value of all lives submitted for insurance is now an acknowledged fact, the manner in which the inquiry is conducted varies in different offices. The physician had little or nothing to do in the early days of insurance, which was then regarded in the light of any other contract between two individuals not necessitating the interference of skilled evidence. But as time wore on and the conditions of the contract became better understood, it was found that neither party was in a position to value the data upon which it was to be based, unless the state of health of the applicant and the various contingencies bearing upon his prospect of life were duly estimated. The physician now became an essential aid in the furtherance of life insurance business. It soon became apparent that although he might be fully competent to arrive at a satisfactory result by any method of examination that was most convenient to himself, it was necessary for future reference, as well as to enable the Board to form an opinion upon the various points at issue, that his reports should be made in a definite and uniform manner. Hence all offices now require the

* An extract from Dr. Sieveking's recent work, "The Medical Adviser in Life Assurance."

† See History and Constitution of the Equitable Society, by William Morgan, F.R.S.

‡ Ample illustrations are given in Mr. Francis's Annals, Anecdotes, and Legends of Life Assurance: London, 1853.

* Etude Médico-légale sur les Assurances sur la Vie. Paris, 1866, p. 109.

examination to be conducted according to a certain rule; and a fixed series of questions are issued, so that a record may be at hand which establishes both the bona fides of the policy-holder and the manner in which the inquiry into his health was made.

The great difficulty in framing the queries has consisted in steering the middle course between pedantic minuteness on the one hand and too great breadth on the other. The former may prove vexatious to the applicant and irritating to the physician; but the latter may err by not suggesting subjects that a careless or much-occupied practitioner may slur over or forget. The medical man should remember that negative evidence is often as important as positive indications, and that while he has the opportunity of a personal interview with the applicant, the Board, who have to decide the ratable value of the life, do not possess this advantage. It often happens that the young practitioner, or one who knows little of the difficulties of framing a correct estimate of probabilities, resents the inquiries made by an office as an impertinence and as an imputation upon his mode of reporting; but any one who will bear in mind that, important as his functions may be, the decision must ultimately rest with the Board of Directors, and that they are responsible for the general business of the office, will also admit that they have a right to ask for such information as they may deem necessary to guide them. Many careless and slovenly reports have come to our notice, and this is the less to be justified now that the medical profession benefit pecuniarily to a very large extent by the system at present in force. It may be laid down as a general rule that the best men give the most satisfactory and detailed reports, as they fully appreciate the aid they afford towards the development of a social scheme of the highest value and importance.

The proposal for assurance, or the chief facts it contains, are submitted to the medical officer, and the statements subscribed to, on it, afford useful data for comparison with the facts elicited by the examination; nor should the replies given by the proposer's friends be overlooked for the same reason. The manner in which they respond to the inquiry about the temperance of the applicant, frequently affords a clue to further investigation, which he himself might withhold.

The age is an important element, not only as regards the amount of premium to be paid, but also in reference to the vis vitalis of the individual. It is proper that he should appear the age he assigns; but while it cannot be regarded as otherwise than generally favorable if he should look younger, it is decidedly the reverse if he looks much past his registered age, as this indicates precocious development in the young; and in those who have attained full manhood it is a sign of premature decay, depending, possibly, upon the anxiety and depression of business, upon exhausting diseases or excesses, or simply upon want of the normal vigor. In any of these cases the prospect of longevity would be reduced.

As the rates of insurance are based upon the calculated prospect of life at each age, the medical man need be under no apprehension in recommending persons of advanced age, who are in good average health, to insure. Our own experience accords with the conclusions arrived at by Mr. Neison, that the generally received opinion as to the insecurity of old lives * is fallacious, and that they are paying risks. They have passed through the dangers that beset early life, have learned how to take care of their health, and have probably attained that competency and contentment which are among the best guarantees for a prolonged existence.

The effects of intemperance, as proved by Mr. Neison, exhibit themselves chiefly at a comparatively early age, the maximum rate of mortality in intemperate lives occurring between 41 and 50, so that a person who at that age gives evidence of habitual temperance has escaped one of the most prevalent causes of degeneration of the tissues, and may boast of his age being

"As the lusty winter,
Frosty but kindly."

The question of temperance is unfortunately one to which the special attention of medical officers has to be directed, both in the case of male and female candidates for insurance. The difficulty that we have to deal with consists in the very great latitude in the definition of intemperance. But for the purpose of life insurance the broad line may be laid down, that the habitual spirit-drinker, and especially one who is found to take strong drinks early in the day, ought to be declined altogether. The beer and wine drinker does not shorten his life frequently by excess, but there is scarcely a degenerative condition of the body that may not result from the abuse, or rather the habitual use, of ardent spirits.

It is doubtful whether teetotallers can be regarded as very good lives, because they are frequently reformed drunkards; but when they have been advocates of the system before they had committed any excesses, or when they have taken the pledge before degenerative changes had occurred in the body, one cannot doubt that the teetotaller may be regarded as a good life. "The reformed drunkard," as Dr. Brinton justly observes, "is not a good life; his repentance, as regards his physical constitution, often comes too late. Many months or even years of the most complete abstinence scarcely suffice to restore his probabilities of existence to a level with those of the temperate user of alcohol. Setting aside the not inconsiderable chances of his relapsing into old habits, his constitution often seems to have a peculiarly treacherous character; its apparently robust health consuming away with unusual rapidity under a moderately severe attack of any acute disease."

Excess in drinking is admitted by all physicians to be the frequent direct and indirect cause of fatal illnesses. Gluttony is less to be regarded as a cause of mischief, because the system more readily adapts itself to a certain excess of alimentary supplies; and solid food not being so easily taken up and assimilated, a check takes place spontaneously to the introduction of more than a given quantity of solid food. The truly temperate man takes as much food and beverage as he requires for the due performance of all his functions, and not more of one or the other; and the common experience of man, which is supported by scientific observation, is to the effect that our ordinary food goes farther and lasts longer, if with it we consume a quantity of beer or wine, enough perhaps to exhilarate, but not sufficient to confuse or weaken the intellectual powers.

A MAN was recently examined in this city who could expand his chest from 32 to 40 inches. As several members of his family had died of consumption, he had for some years past cultivated the habit of expanding his chest to the utmost, in the hope of thereby diminishing his liability to have the same disease.

* On the Medical Estimate of Life for Life Assurance, by Stephen Ward, M.D. London, 1857.

A MORTALITY EXPERIENCE OF TWENTY-FIVE YEARS.

We are indebted to one of our New York life insurance companies for the following brief statistics:

During a period of twenty-five years the number of deaths which occurred among the policy-holders of the company amounted to 2,202. The causes of death, arranged in groups, are the following:

Class of Disease.	No. of Cases.
Zymotic	401
Nervous	339
Respiratory	613
Circulatory	135
Digestive	307
Genito-urinary	80
Uncertain seat	118
Integumentary	32
External causes	175
Age	2

In the January 15th number of The Record, the causes of 1,000 deaths were given from the records of another company. Comparing the percentages of the deaths in the two companies according to the groups of diseases, we obtain the following:

	1,000 deaths.	2,202 deaths.
Zymotic	19 per cent.	18 per cent.
Nervous	15 "	15 "
Respiratory	36 "	28 "
Circulatory	6 "	6 "
Digestive	8 "	14 "
Genito-urinary	3 "	4 "
Uncertain seat	4 "	5 "
Integumentary	— "	1 "
External causes	7 "	8 "
Age	— "	— "

It is interesting to notice the close correspondence between the two lists, except in two of the classes, namely, the respiratory and the digestive. It is in these very classes, however, especially in the respiratory, that we should most expect to find variations in the experiences of different companies.

Correspondence.

LET THE GOOD WORK GO ON.

To the Editor of The Medical Record.

While I am indebted to a life insurance company for the privilege of reading The Record regularly, I cannot at the same time resist the inclination to say a few words about the strange ways of agents and the still stranger ways of certain companies. The evils of which I complain are not by any means peculiar to my own experience, but are undoubtedly encountered by scores of medical examiners in every part of the country, for the life insurance solicitor is the same everywhere.

Before mentioning these, let me remark that the things most needed in both agent and examiner are, honor and integrity. The physician, furthermore, should be well posted in auscultation and percussion, and should have excellent diagnostic skill in diseases of the chest. He should also be familiar with the chemical tests necessary to ascertain the condition of the urine. But, above all things, he should deal honestly with the company. If he entertains doubts in any case, he should let the company have the benefit of them. Two years since I rejected an applicant on account of mitral regurgitation of the heart. The agent remarked at the time that "I had lost him two hundred dollars." I replied that it was better for the company to pay him two hundred dollars, if need be, rather than to lose ten thousand by issuing the policy. Six months afterwards the man was dead. A few years since an agent of the —— Life Insurance Company called on me, and, stating that he was the accredited agent for said company, expressed the wish that we would get along well together. I remarked that it would not be my fault if we did not. A few days later I received a letter from Dr. ——, medical officer of the home office in New York, enclosing a copy of this agent's letter to him, in which it was stated that he found a large number of persons in Springfield ready to be insured, but they were unwilling to come to me for examination, as they were my enemies. The letter ended with the request that Dr. —— might be appointed examiner in my place. Now, had it not been for the promptness of the home medical officer in asking me the facts in the case, the company would have probably suffered, for the doctor whose name the agent suggested was a homœopath of the lowest order, and this agent employed him in his family, and undoubtedly intended to "use" him. This man was, of course, dismissed from the employ of the company, but he very soon became the agent of another prominent company, whose name I shall in all charity conceal. This company also instructed him to employ me as medical examiner. Before long he brought an applicant to me for examination. On looking over the application I noticed that the man's occupation was put down as that of a farmer. As I knew that the fellow was a saloon-keeper and gambler, and patronized his own bar to excess, I feigned that I could not understand why he had been marked as a farmer. The agent replied, in a low tone, and with a knowing look, wink, and nod of the head, "That's all right." Not wishing to have a fuss with the fellow, I recommended him, but wrote at once to the medical officer at the home office, stating all the facts. The result was, the man was rejected. In a few days the agent came with a letter from the general agent, stating that the Medical Officer of the Home Office had rejected the application, and requesting me to write to the company, urging them to issue the policy. This I refused. Subsequently he brought me a second letter from the General Agent, which read as follows:—"Cox must have written privately, as the home medical officer says this man drinks whiskey. —— Cox! Don't bring him another risk for examination." Nor did he bring me another risk, nor was this agent removed, nor did the company investigate the matter. I thought this was a poor reward for my fidelity to the company. But where has that company gone? "*To where the woodbine twineth*"—where all companies should go which do not respect competent and faithful medical examiners.

I cannot agree with your San Francisco correspondent, who says that it were better to do away with medical examinations, for I believe that medical examiners are the main guardians of life insurance companies. At the same time, it is amazing how slow the companies are to appreciate the truth of this. They are exceedingly anxious to get agents, but very few of them trouble themselves about their medical examiners, or show any anxiety to secure good men, and keep them after they have secured them.

George M. Cox, M.D.

Springfield, Mo., *April* 9, 1874.

VERY OLD MEN.*

A PENNSYLVANIA gentleman called yesterday to say that Simon G. Troop, the Legislative Rip Van Winkle referred to in Friday's *Tribune*, was appointed one of the judges of Monroe County, Penn., by Gov. Geary, after he had passed his 80th birthday, and he was now discharging the duties with marked ability. He added that the climate of that portion of Pennsylvania contributed to the longevity of its citizens. George Labar, a resident of Monroe County, is 112 years old. Mr. George Trivle, of Daleville, is the oldest landlord in the State of Pennsylvania, having kept tavern ever since licenses were granted by the Governor of the State, and is now, at the age of 109 years, proprietor of the hotel at Daleville. The ages of these two veterans, as Mr. Gilmore assures us, are both well authenticated.

And yet there is an opinionated Englishman, whose name I do not remember, making all sorts of efforts to discredit Capt. Lahrbush, who completes his 108th year to-day. Fortunately, the existence of unquestionable evidence of the fact that Capt. Lahrbush was an officer in the British army before the commencement of the present century, destroys the base upon which the Captain's assailant endeavors to erect a superstructure. Corroborative evidence of the accuracy of Capt. L.'s memory, the truthfulness of his statements and the integrity of his character, is found in his daily conversation. Those who know him best, and see him most frequently, entertain no doubts concerning his age. The accuracy of his memory in relation to events which occurred ten years before and fifteen years after the beginning of the present century, is perhaps the most remarkable trait in the character of this very remarkable man. In illustration, take the following incident: Captain Lahrbush accompanied me one day last winter to the residence of my cherished friend, the late Hugh Maxwell. In the course of a long conversation about the wars in which Capt. Lahrbush had served, the latter was describing a campaign in India toward the close of the last century. Mr. Maxwell inquired if, at that time, he became acquainted with an officer bearing his name. Capt. L. replied that he remembered Lieut.-Col. Maxwell in India, but that he did not make his acquaintance until several years afterward, when stationed at the Cape of Good Hope, where Col. Maxwell came to enjoy his "leave." Mr. Maxwell asked why the officer used up his "leave" at the Cape, instead of going home. Capt. Lahrbush replied that officers serving in India could go no further west than the Cape of Good Hope without loss of pay. Mr. Maxwell then requested his granddaughter to bring a letter from his library; that letter being from Mr. Maxwell's uncle, written at the Cape of Good Hope, and bearing the date indicated, exactly verified Capt. Lahrbush's statements. Lieut.-Col. Maxwell had, for economical reasons, passed his leave of absence from the army at the Cape, which place, on account of its salubrious climate, was a favorite resort for British officers. Capt. Lahrbush recently received a message, by a New York lady who had been residing some time in Paris, from the Count de Waldeck, who remembers him, while both were at Madras, in 1798. The Count, although two years older than Capt. Lahrbush, enjoys good physical and mental health.

Capt. Lahrbush enters upon his 109th year in good health and spirits. He is a member of the Rev. John Cotton Smith's church, where, on the corner of Fifth ave. and Tenth st., he is a regular attendant. He dined with us to-day, as is his frequent habit on Sunday, and if those who cavil about his age could have listened to his conversation for an hour or two, they would have had their doubts removed. His familiar description of most of the cities of Europe, India, Australia, Jamaica, etc., etc., prove him to have been not only a great but a most observing and intelligent traveller. He speaks the French, German, Dutch, Spanish, and Portuguese languages.

It was quite a luxury, he said, to meet, as he did the other day, a Hollander as a conductor on a Third ave. car, with whom he had a pleasant conversation in that language.

NEW YORK, *March* 8, 1874.

* A copy of a recent letter from Thurlow Weed to the Editor of the *Tribune*.

MEDICAL EXAMINERS' BLANKS.

THIS being a time when many of the companies are considering the question of introducing new forms of blanks for their medical examiners, we beg leave to submit the following translation of a form used by one of the prominent life insurance companies of North Germany.

The blank in question bears at its head the title of "Health Certificate," and commences with an appeal to the examiner to be very precise in all his answers to the printed questions, which are all addressed directly to him. He is also reminded of the fact, that upon his skill, carefulness, and truthfulness depend the interests of many families. With this in mind he is to furnish to the company the most complete picture possible of the person upon whose life it is proposed to issue a policy. Then follow these questions:—

1. How long have you been acquainted with the above-named person?

2. How long have you been his attending physician?

3. When did you see him last and satisfy yourself of his condition of health?

4. What is his general build, as regards
   Height,
   Weight,
   Corpulence or leanness?

5. What is the hue of his complexion and the expression of his countenance?

6. How is the chest shaped, and what are the proportions and form of the neck?

7. What is the condition of the abdomen? Is the liver or the spleen enlarged? Is there any hernial swelling?

8. Are the limbs, as well as other parts of the body, free from any defect, fracture, curvature, exostosis, enlarged veins, etc.?

9. Do the different organs of sense perform their functions normally? If not, state in what respect they are deficient.

10. What are the results of a physical examination of the chest and abdomen by percussion and auscultation?

11. Is the respiration full, easy, and deep, and free

from abnormal sounds? Does the chest expand uniformly in all directions? Are the respiratory movements performed without any noticeable effort; and can they be kept up for a reasonable length of time without exciting cough?

12. What is the condition of the voice? Is it clear, resonant, and free from hoarseness?

13. What is the condition of the circulation, as judged by the pulse-beat at the wrist and the action of the heart in the præcordial region? Is there any noticeable pulsation in the abdominal region?

14. What is the condition of digestion and the other functions of the body?

15. What diseases, ailments, mental disturbances, bodily injuries or fractures has the above-named person had or been treated for by another physician before you became his medical attendant?

16. What diseases, ailments, mental disturbances, bodily injuries or fractures has he consulted you for, and at what time was the treatment in each case carried out?

17. How did he recover from these ailments or injuries, and what effects have they left upon his health?

18. Does the person above named now require, or has he ever required, for prophylactic or curative purposes, any form of bleeding or a course at the "baths," "springs," "vegetable diet" or "wheycure establishments?" If so, state the particular reasons.

19. Is there any hereditary disease in this person's family, or any disease that has frequently made its appearance among its members; and does he show any signs of being predisposed thereto?

20. Has he had the small-pox or the cow-pox, and did the latter run its regular course (to be judged, of course, by the condition of the scar of inoculation)?

21. Is the person above named at the present time in good health and free from all disease?

22. Do you also consider him free from the *seeds* of any disease of a dangerous nature?

23. What influence do his surroundings, occupation, and mode of life have upon his health? Is he moderate in his use of spirituous drinks?

24. In the foregoing answers have you omitted anything pertaining to the person's vital functions, external appearance, mode of conducting himself, physical strength, temperament, etc., which might be of value in determining the nature of the risk?

25. Are you related to the above-named person, and in what degree? *

I declare that I have written the above conscientiously and with a full knowledge of my official duty, and have concealed nothing pertaining to the present or past condition of health of the person therein referred to.

* In the additional instructions it is stated that in case the attending physician is a near relative of the person examined, his certificate must be testified to by another physician.—EDITOR.

The casual reader might think that the certificate given above differed but little from those in use by the great majority of American life insurance companies; but on closer examination he would find several very important differences between the two. In the first place, the person's usual medical attendant becomes *ipso facto* the company's medical examiner. We believe this custom does not prevail with a single American company. In the second place, a complete and conscientious answering of the German questions necessarily implies a degree of thoroughness in the examination which the American method of insuring lives does not admit of carrying out. The German plan puts the person to be examined on very much the same footing as the recruit, while the American expects the medical examiner to make a good guess at the person's physical condition and chances for longevity. On the other hand, certain things are practicable in an old and well-settled country like Germany, which could not possibly be carried out in a growing country like ours. Still the American plan might, we think, be improved by adopting some features of the German.

Miscellaneous.

WHAT IS HABITUAL INEBRIETY?—Judge Shipman, of the New York U. S. Circuit Court, in a recent charge, said: "I do not suppose if a uniformly temperate man should be overcome by liquor, and die in consequence of a single debauch, that he could be said to have died in consequence of the *habitual* use of intoxicating liquor. It is not for me to say how long the use of liquor must be continued to make it habitual. The law prescribes no particular length of time that I am aware of. You are to judge of this as of any other fact of the case. The testimony on the part of the defendants is that his death was caused by the excessive use of alcoholic liquors and of opiates, and this statement is contained in the physician's certificate of death, and is exactly or substantially contained in the verdict of the coroner's jury. If he used liquors habitually and excessively, and also used opiates for the purpose of allaying the excitement of liquor, and they combined to cause and did cause his death, and the liquor directly, materially, and effectually contributed to his death, then the policy was voided. If he used an undue quantity of liquor habitually, and in the wild and excited state which liquor creates, resorted to overdoses of opiates to produce quiet, and so from the combined effects of these stimulants and narcotics died, and the stimulants directly, materially, and effectually contributed to his death, then the policy is not binding upon the company."

MEDICAL EXAMINATIONS.—From the *Insurance Times* we learn that the Bremen Medical Society, after mature deliberation, has recently adopted the following resolutions:

Resolved, That when a company requires a medical examination by its regular medical examiner, it shall be conducted at the premises of the physician. A family physician shall give his certificate only at the personal request of his patient, or, if at the instance of the company, only with the patient's express consent. Certificates shall be delivered by physicians sealed, and the sealed certificates shall be opened only by the officers of the company, never by the agent. The grounds assigned by a physician for refusing an application shall be in no case divulged to the public,

and the members of the society bind themselves not to make examinations for any company which shall disregard this provision.

Fees shall be charged for appearing and testifying as a witness, for records of diseases, *post-mortem* examinations, and for all reports other than upon the ordinary examination, in addition to the regular examination fees.

TAMPERING WITH MEDICAL CERTIFICATES.—The following case, which occurred recently in the State of Connecticut, illustrates one of the ways in which a bad risk can be foisted upon a company.

Not many months since an applicant was brought before one of the regularly appointed medical examiners of a prominent life insurance company for examination. His health was poor, and the examiner unhesitatingly rejected him. A short time afterwards the physician was astonished to hear "that Mr. X., whom he had *recommended* for a policy a few months previously, was dead." As the examiner was known to be a very careful man the company sent a special agent to investigate the case, and thus it was discovered that the physician's unfavorable report had been changed, by means of erasures and the introduction of additional words, to one of favorable purport.

THE HEREDITARY CHARACTER OF CANCER.—In medical circles there has always been a great deal of discussion upon the question, whether or not cancer be hereditary. The following recently discovered letter from Dr. Short, who was the chief medical officer at St. Helena at the time of Napoleon's death, will perhaps be of interest in this connection. It reads as follows:—

"St. Helena, May 7th, 1821.—You will doubtless be very much astonished to learn that Napoleon died on the 5th of May, after a prolonged illness. His disease was cancer of the stomach, which undoubtedly began to develop already many years ago, though it was only during the past few months that it took on a condition of ulceration. A few days before his death I was frequently called to take part in the consultations which were held, but never saw him professionally—owing to his unwillingness to see strangers—until just before his death. The face of the dying man was the most beautiful I ever saw; his features were characterized by the most perfect peacefulness and gentleness. The following day I was present at the post-mortem examination, which was made at Napoleon's own special request, for the purpose, as he said, that his son might be put upon his guard, in case the disease proved to be hereditary in its nature. During his entire illness he had not shown the slightest disposition to complain, but maintained to the very end his wonderful mastery over himself. It appears that Napoleon's father died of the same disease, and his sister, the Princess Borghese, was also supposed to have died of it. Hence climate and mode of life could have had nothing to do with causing his death."—*Deutsche Versicherungs-Zeitung.*

STATISTICS OF SUICIDES IN VIENNA FOR 1873.—There were 216 suicides (172 in 1872) within the police districts of Vienna during the year 1873. The largest number occurred during the months of May and December. 182 were males, 34 females. The youngest was 13 years old, the oldest 80. 77 hanged themselves, 52 shot themselves, 33 took poison, 30 were drowned, 10 severed blood-vessels or cut their wind-pipes, 10 threw themselves down from great heights, 2 stabbed themselves, and the same number allowed themselves to be run over. Twelve cases occurred in January (11 males, 1 female); eight in February (all men); sixteen in March (14 men and two women); twenty-one in April (12 males, 9 females); twenty-four in May (19 men, 5 women); 19 in June (16 men, 3 women); 19 in July (17 men, 2 women); 17 in August (15 men, 2 women); 15 in September (all men); 21 in October (18 men, 3 women); 18 in November (15 men, 3 women); 26 in December (22 men, 4 women). Loss of fortune, anxiety in regard to obtaining food, incurable diseases, and, finally, disappointed love, were generally the causes for the deed.—*Deutsche Versicherungs-Zeitung.*

THE EMPRESS EUGÉNIE INSURED FOR $200,000.—As the report had gone abroad that the young Prince Napoleon was insured for a large amount, which would be paid to him on becoming of age, the *Moniteur des Assurances* denies in toto the truth of the report and gives what it declares is the true version. It reads as follows:—The Empress Eugénie, a short time after the birth of her son, founded "The Imperial Orphan Asylum," and at the same time insured her life for 2,000,000 francs, with the intention of leaving this sum in her will to the institution she had founded. Since that time, however, the amount of the policy has, by mutual agreement, been reduced to half the original sum. This transaction gave rise to the circulation of the most fabulous stories among the people; and, in the days of the Commune, the insurance companies had very great difficulty in dissuading the leaders from exacting a heavy tax on what they declared was "money which belonged to France."

The amount is distributed among nine different French companies; and the Empress, besides having to pay the extra 11 per cent. for crowned heads, not only pays the premiums without any reduction, but even refuses to enjoy the dividends.—*Ibidem.*

EFFECTS OF INTEMPERANCE ON LONGEVITY.—Mr. Neison, in a very elaborate paper on the rate of mortality among persons of intemperate habits, shows that the expectation of life of intemperate persons is much below the average; and that an intemperate person of 20 has reduced the average expectation from 44.2 years to 15.6; a person of 30, from 36.5 to 13.8 years; a person at the age of 40, from 28.8 to 11.6 years; and also that while diseases of the nervous system and digestive organs give rise to 15.9 per cent of deaths in the population at large, they form 50.40 per cent of all deaths among the intemperate.

Intemperance reduces the expectation of life more in the upper classes than among mechanics and tradesmen.

Mr. Neison finds that from the age of 16 upwards the relative mortality of intemperate persons exceeds that of the general population of England 3.25 times. At the term of life 21 to 30 the mortality is upwards of five times that of the general community, and in the succeeding 20 years of life it is above four times greater. He offers the consolatory remark that the drinking practices of society have improved during the last quarter of a century, and that what (in 1851) was commonly regarded as free living, would some years since only have been regarded as moderation. "In like manner," he adds, "it may be hoped that the usages of society will continue to improve; and, at no distant date, the habits now considered not to exceed the bonds of moderation be altogether unknown in polite and refined society."—*The Medical Adviser in Life Assurance.*

Original Lectures.

LECTURE UPON THE GENERAL THERAPEUTICS OF THE NERVOUS SYSTEM.*

By E. C. SEGUIN, M.D.

Part I.

(Phonographically reported for The Medical Record.)

Gentlemen:—I have thought that the last hour of your survey of nervous diseases could not be better spent than in a rapid review of certain principles of therapeutics, and in a partial study of the remedial agents classified as much as possible in accordance with these principles. In offering you the following classification, I wish to warn you that it has little in common with the therapeutic propositions which you will find in text-books, whether upon the practice of medicine or upon diseases of the nervous system. Inasmuch as the ground to be gone over is so large, you will pardon me if I restrict myself to short practical remarks upon the various heads of the lecture.

The following is the classification which I have long had in my mind, and which I now submit to you:

CLASSIFICATION.

A—Agents which affect the blood-supply of nervous system.
- 1. Agents which increase the blood-supply.
- 2. Agents which diminish the blood-supply.

B—Agents which affect the substance of nervous system.
- 1. Agents which increase action of
  - *a*, brain.
  - *b*, spinal cord.
- 2. Agents which diminish action of
  - *a*, brain.
  - *b*, spinal cord.

C—Restoratives and Tonics.
D—Counter-irritants.
E—Electricity.
F—Hygienic means.

CLASS A.

Means which affect the blood-supply.

The indication for affecting the blood-supply of a nerve-centre is sometimes a perfectly correct and logical one.

In practice, we have a certain class of cases in which the symptoms are due to hyperæmia of nerve-centres, and also a certain class in which the symptoms are due to anæmia of nerve-centres.

The vital question is to determine whether the hyperæmia or anæmia be primary or secondary.

Few questions in pathology are of more importance than this, and few have caused such prolonged discussions. This is not the place to examine this matter, and I must limit myself to stating the conclusions to which experience has led me. I believe that true, primary hyperæmia of the brain or spinal cord is a very rare affection, infinitely rarer than the teaching of books would lead us to suppose. In many so-called cases of cerebral congestion there is, I believe, no hyperæmia, but only mal-nutrition, which may be attended by a secondary and passive congestion. In all such cases the leading indication is not to deprive the nervous centre of blood. The effects of anæmia are better known and more commonly observed; and it is an instructive fact to recollect that what we to-day consider as typical of anæmia (epileptic loss of consciousness) was not many years ago looked upon as typical of hyperæmia. In brief, I believe that the indication to diminish the amount of blood circulating in the brain (and spinal cord) is very rarely presented to us practitioners, and that the contrary indication is much more commonly encountered.

The first class of means is subdivided into two subclasses:

(1) Means which increase the blood-supply.

This sub-class may be still further subdivided as follows:

(*a*) Decubitus, or posture.
(*b*) Compression of arteries of limbs.
(*c*) Stimulants.
(*d*) Agents paralyzing the vaso-motor nerves.
(*e*) Measures which act by increasing the activity of the nervous centres.

(*a*)—The amount of blood in the spinal cord can be materially increased by placing the patient upon his back.

The amount of blood in the brain can be materially increased by elevating the legs and arms.

In syncope, therefore, and in all cases where we may suppose that anæmia of the brain is present, the first thing to be done is to place the patient upon his back, and we may, besides, elevate the limbs and trunk. Anæmic patients, who have no positive disease, but who at times feel weak and faint, or suffer from attacks of vertigo, should also have recourse to this means.

(*b*)—Compression of the arteries of the limbs is a very important and powerful means.

This should be done by tourniquets, as ordinary bands alone will not arrest the circulation carried on through the arteries, but will prevent the return of blood to the body.

This procedure is one which is rarely resorted to, and I would recommend its execution only in extreme cases of cerebral anæmia, as a means next to transfusion. The tourniquets should be applied not simultaneously, in order that you may study the reaction of the heart.

In the days when epileptic seizures were regarded as due to cerebral hyperæmia, compression of the carotids was advised and done to cut short the paroxysms. Insensibility can in this manner be produced in the healthy individual. In epileptics the results obtained were not satisfactory, and the measure is one we now condemn as unphysiological. Besides, in pressing upon the carotid we act upon the vagi, and influence the heart in that way.

(*c*)—Of the stimulants, alcohol is the best. Preparations of ammonia are employed, but they are less efficient than alcohol. The dose of alcohol in cases of anæmia of the nervous centres is to be gauged only by the degree of reaction observed. In the drowsiness and exhaustion which result from prolonged exposure to cold with or without over-exertion, in cases of loss of blood, brandy will be tolerated in enormous quantities, and the subject saved.

In general terms food is to be regarded as a stimulant, for the general circulation is made more active by taking it. Probably many of you have had an afternoon headache magically cured by dinner.

(*d*)—Paralyzing the vaso-motor nerves, by producing enlargement of the arteries, is productive of hyperæmia in the arterial district to which the nerves are distributed.

This proposition is demonstrable by experiment upon animals. If we cut the sympathetic nerve in the

* Delivered at the College of Physicians and Surgeons, New York, Feb. 21, 1874.

neck (as was done by Pourfour du Petit in 1712), we obtain a dilatation of all the arteries of the superficial parts of the head, and of all parts of the face, together with contraction of the pupil. As signs of hyperæmia, we observe increased size and pulsation of arteries, redness, increased heat, increased secretory action. If we excise the superior cervical ganglion of the sympathetic, we produce hyperæmia of the brain itself. In medicine we cannot resort to this radical means of paralyzing the vaso-motor nerves.

Of means to be used for this purpose, the most effectual is inhalation of the nitrite of amyl. The proper dose is from two to five drops.

If the remedy is to be administered by the medical attendant, it needs no preparation; 5 to 10 drops may be poured upon a cloth or handkerchief, and a part or the whole of the quantity allowed to enter the patient's nostrils. In many cases the physician is away during the illness or seizure requiring the use of nitrite of amyl, and the nurse may give it safely, diluted in alcohol, in such a way that a teaspoonful shall hold the proper dose.

The effects of amyl, apparent in a few seconds, consist in hyperæmia of the head and face, of increased heart action, and of redness and heat in the remainder of the body sometimes. From the condition of the face and the external parts of the head, and from the sensation of fulness in the eyes and within the head, associated often with giddiness, we infer that there is hyperæmia within the cranium as well as without.

One indication for the use of this remedy we find in the condition present at the commencement of an epileptic convulsion. In the very earliest stage, during the occurrence of the aura, or the period preceding the *aura*, which is recognized in some patients, is the proper time to resort to this remedy. If used then, or at the moment the spasm of the vaso-motor nerves commences, indicated by the first signs of failure of consciousness, in many cases the attack can be aborted; in others diminished in severity. Nitrite of amyl has also been used with success in angina pectoris, in asthma, and in various spasmodic affections, involving muscular or vascular parts.

Chloroform has been used in the same manner, but its mode of operation is unknown, and it is much less effectual.

Another means is by over-stimulating the sympathetic nerves, but this means cannot be employed with any great degree of certainty. This is more theoretically than otherwise correct (*vide infra*, sub-class 2, e).

(*e*)—The means which produce functional hyperæmia are exceedingly numerous, embracing as it does all those agents which increase the activity of the nervous centres.

Hyperæmia of the nervous system occurs as the result of functional activity in the same manner as it is developed in the various organs of the body as the result of the same cause; such as the congestion present in the stomach and intestines and liver, during digestion, etc. In this connection it is well to remember that it has been shown that increased temperature about the head is developed during exercise of the mental faculties, or by the operation of emotion.

The medicines referred to will be found in class B, sub-class 1.

(2) The second sub-class of A embraces all the means employed to diminish the amount of blood circulating in the nervous centres.

(*a*) Venesection.
(*b*) Decubitus.
(*c*) Compression of veins of the limbs.
(*d*) Cold.
(*e*) Those means which stimulate the vaso-motor nerves.
(*f*) Means which diminish the activity of the nervous centres.

(*a*)—There can be no doubt that blood-letting, if sufficiently large, will produce cerebral anæmia, for, although physiologists still believe that the quantity of contents of the cranium is invariable, yet they to-day admit that the amount of intra-cranial blood may be reduced; serum taking its place about the vessels and in the sub-arachnoid space. I need hardly tell you that bleeding is out of fashion, and that we nowadays never use it. I would, however, say that with sufficient symptoms of sudden and violent cerebral hyperæmia occurring in a subject full-blooded enough not to be injured by the loss, I should bleed without hesitation, by a large opening, and to impending syncope.

It is perhaps right for me to speak here of leeches and wet-cups, in order to express my belief that these agents do not relieve hyperæmia of deeply placed organs so much by withdrawing blood, as by irritating nerves, and thus acting upon the vaso-motor nerves of the affected parts. These means should therefore be placed in class D, with counter-irritants.

(*b*)—If the brain is the nervous centre to be affected, the *decubitus* should be with the head raised; or the patient should be placed in a chair with his legs and arms in a pendant position. This latter posture is useful in certain cases (rare, I believe) of insomnia dependent upon true, primary cerebral hyperæmia.

In cases of spinal congestion, myelitis, or any affection of the spinal cord attended by congestion, place the patient upon his face. Relief may be secured by permitting the patient to occasionally lie upon the side, but lying upon the back should be almost entirely forbidden.

(*c*)—Compression of the veins of the limbs may be effected by means of ligatures. Formerly employed in convulsive affections, it has now fallen into almost complete disuse.

(*d*)—Cold, when used in a proper manner, undoubtedly has the power of diminishing the amount of blood in a part deeper than the skin. It must, however, be applied continuously if any benefit would be derived.

In the treatment of meningitis and all affections in which there is present hyperæmia, either primary or secondary, within the cranium, ice should be placed upon the head and at its base for considerable periods of time, carefully watching the effects in order to remove it at once if there is evidence that too much depression is being produced.

The same means may be used with benefit in intra-spinal inflammation and congestions.

Cold is also applied to the back of the neck and upon the spinal column with the object of acting, through the spinal cord, upon the vaso-motor nerves going to distant organs.

A word as to the means of using cold. You will hear Chapman's rubber bags highly recommended, but I suspect that their cleanliness and ease of application are what have caused their fame. It is best to apply the ice in block immediately to the skin, well guarded by cloths to catch the drippings; or pounded ice (with or without salt), enclosed in a cloth or bladder, may be used; or, lastly, the ether spray-douche may be employed.

(*e*)—The vaso-motor nerves may be directly stimulated by galvanism, causing contraction of the arteries supplied by these nerves, and consequently anæmia of the parts to which these arteries go. This may be ex-

perimentally demonstrated, for the face, by galvanizing the sympathetic in the neck; for the fundus of the eye and the brain, by localizing the action of the current upon the superior cervical ganglion. The positive pole should be applied under the ear, in front of the mastoid process (small electrode), the other electrode be placed upon the fifth cervical vertebra; the current, of from 4 to 8 Stöhrer's cells, allowed to pass for one to two minutes.

Evidence of spasm of the cerebral arteries is obtained in the shape of vertigo developed at the moment of closing and opening the circuit. The vessels of the fundus of the eye have been seen to grow smaller under this application. Anæmia of a part of the brain is no doubt the inevitable immediate result of thus irritating the superior cervical ganglion, but a law of physiology stands in the way of our accepting this as a means to be used to meet the indication of diminishing the supply of blood. The law I refer to is that of never-failing relaxation after spasm, of exhaustion after stimulation. This law leads me to believe that *after* the primary cerebral anæmia produced as above described, there is a consequent, equally inevitable relaxation of blood-vessels and hyperæmia produced. This is how I would justify the placing of this means, galvanization of vaso-motors, among those which increase the amount of blood in the brain (*vide supra*, sub-class 1, d).

Among medicinal agents, I know of few which will stimulate the vaso-motor nerves, which are not medicines that should be embraced in another class. One exception, perhaps, is ergot.

Some recent observations seem to indicate that ergot diminishes the amount of blood circulating in the spinal cord and in many other tissues. It has been demonstrated that belladonna in small doses will accomplish the same thing. These two remedies, therefore, are quite generally used in the treatment of congestions and inflammations affecting the nervous centres. We are indebted to Dr. Brown-Séquard for their introduction into practice upon correct indications.

(*f*)—Diminution of the activity of the nervous centres may be brought about by mental and physical rest. By mental rest I understand, not inactivity, but a cessation of the strain, intellectual or emotional, which has acted upon the patient. The merchant or professional man should diminish or cease altogether his work, whether in the way of actual labor or responsibility; he should resort to other occupations and to amusement. On the contrary, the emotional girl, or the insane subject, should be given work, physical if possible, in order to withdraw the attention from the contemplation of delusive sensual or pure emotional subjective creations. The operations of grief, of misery, of concentration in a diseased self, should be remedied by a variety of means (including amusements) which will suggest themselves to you. At all events, please remember that mental rest is not synonymous with inertia or idleness.

Physical rest is of great utility, and has been employed in locomotor ataxia with especial benefit.

Various remedies may be used for the purpose of diminishing the activity of the nervous centres, and these will be referred to in sub-class 2 of the next class, B.

Class B.

Means which Affect the Substance of the Nervous Centres.

(1) Agents increasing action of nervous centres.—Excitants.

By nervous excitants I understand such means and medicines as produce (or can produce) an immediate stimulant effect upon the nervous centres, independently of any corresponding increase in vascularity. The certainty (specificity?) and rapidity of their action distinguish these medicines from tonics.

(a)—cerebral excitants.	Alcohol, embracing wines, brandies, etc., Cannabis Indica. Belladonna, Opium, Ether, etc., Intellection, Emotional Influences.
(b)—Spinal excitants.	Strychnia, Brucia, Quinia, Cantharides, Exercise (active and passive).

A.—CEREBRAL EXCITANTS.

It is very probable that alcohol acts upon the tissue of the brain and superior motor centres, as well as upon the circulation. I have already referred to the dosing of alcoholic drinks, and would only add that for the present purpose small quantities often suffice. In order to secure uniformity in the dosing of alcoholic stimulants, I should be in favor of using diluted alcohol instead of wines or brandy or whiskey. The only obstacles to the adoption of this practice are the prejudice existing against alcohol, and the fact that some stomachs bear wines and beer better than spirit.

Cannabis indica has been used in cases of melancholia and acute dementia, and in various neuralgic states.

Its specific effect is to excite the imagination. A sort of delirium is produced which, in most cases, is not accompanied by absolute unconsciousness, although the patient has the most extraordinary fancies, hallucinations, and delusions. It is this power of stimulating the imagination which has placed it among the remedies to be administered in apathetic cases. The success of the remedy, however, has not quite equalled the anticipations of theory.

In cases of cerebro-spinal mal-nutrition (*migraine, etc.*) its influence is beneficial.

Belladonna and opium are both stimulating to the brain when given in small doses, increasing intellection and producing hallucinations. When given in large doses they produce, besides, an after-effect of depression.

It is only upon some few individuals that this peculiar effect of belladonna is manifested; and many patients can take this remedy for a long time without complaining of any hallucinations or excitation of the imagination.

One of the dangers of administering opium is the temptation to continued indulgence in the use of the remedy for the sake of the intoxication which it produces. I would ask you always to bear this danger in mind, and to consider the responsibility attaching to the giving of opium as not ended until you are satisfied that your patient no longer uses the medicine. After treating a neuralgia, or other painful affection, with opium internally, or with hypodermic injections, you are to withdraw the narcotic very gradually—to wean your patient, as it were. I cannot conceive of a much greater cause of sorrow for a medical man than to have been the cause of the enslaving of a human being by the opium habit.

Ether produces intoxication which is often very violent, when given by inhalation for purposes of anæsthesia. It is not ordinarily employed as a cerebral excitant.

Emotional excitement is not sufficiently employed as a means for affecting the nervous centres. It is seldom applicable where organic disease is present, but is more especially indicated where the mind is absorbed in contemplation of delusions, and in hypochondriacal and hysterical cases.

Cases of hysterical paralysis have been cured by an alarm of fire, or some other immediate danger. The pleasurable emotion of hope is very powerful, and its use makes possible the success of various quackish methods. In legitimate practice we should, I think, make greater use (within the bounds of truthfulness) of the potent emotions of hope and faith.

Many cases of melancholia have been benefited in a remarkable manner by getting them interested in some matter, either of love, or affection, or emulation. There are patients who have a certain amount of dementia, produced by the presence of some convulsive disease, such as epilepsy, chorea, etc. In these cases intellectual exercise is to be recommended and insisted upon; some intellectual excitement should be daily enforced.

B.—SPINAL EXCITANTS.

Nux vomica, strychnia, and brucia are medicines which affect in an almost specific manner the motor parts of the spinal axis, stimulating it primarily. The result of over-doses of these remedies is spasm of muscles supplied by spinal nerves. In small doses these drugs act upon the same parts slowly, and improve their nutrition. The indication for the use of strychnia, etc., is the existence of simple exhaustion of the nervous centres, of spasm due to weakness and anæmia, of paralysis (inhibitory or reflex) not due to inflammation of the spinal centre.

We also make use of these remedies in some cases of functional nervous disorders. They are beneficial in cases of chorea and epilepsy, the morbid states grouped together under the name of "spinal irritation." In many of these cases the remedy (strychnia) should be given in the manner long ago pointed out by Brown-Séquard, that is, in doses necessary to obtain its physiological effects.

Bearing in mind that females are much more susceptible to the influence of these drugs than males, you should commence the giving of strychnia by doses of 1-40 or 1-32 gr., increasing rapidly to 1-16 or 1-12 gr. three times a day for adults. There is not the same ratio of susceptibility to the influence of this remedy, with regard to age, as is seen in connection with opium and some other remedies, children bearing large doses well. Nux vomica may be administered in 1-4 or 1-8 gr. doses thrice a day, and the doses may be progressively increased.

It is better to use strychnia in solution. If given in pill, you will run the risk of the drug not having been carefully divided in the preparation of the pills; and the additional danger, which is much more likely to happen, that the pills will not be dissolved in the alimentary canal until an accumulation of them has taken place, which will develop results most undesirable. The necessity of using an acid to properly effect a solution of strychnia permits us to use diluted phosphoric acid, which is itself a serviceable remedy in the treatment of nervous affections; or we may use the various acid phosphates which are now offered to us in elegant preparations by druggists.

In cases of paralysis, strychnia may be used hypodermically, with benefit, 1-40 to 1-10 gr. being injected once a day, or once every other day. For this purpose I would recommend Barwell's solution at half strength, 1 minim of which contains 1-50 gr. strychnia.

Quinia sometimes acts in a manner which entitles it to a place in this class of remedies.

There has been considerable doubt as to whether quinia affects the nervous system at all. There are, however, good reasons for believing that the phenomena of intermittent fever are of spinal origin. Quinia cures all forms of this disease almost with certainty. Another reason for believing that quinia affects the nervous centres is the fact that its administration aggravates spinal disease. According to Brown-Séquard, it acts as a poison to epileptics, and this effect will allow of only one explanation, namely, that the motor centres concerned in the production of the paroxysm are excited and rendered more susceptible by this remedy. Lastly, we have the general tonic effects of quinia, which cannot be denied.

Quinia will also stimulate the cerebrum, as is shown by the fact that intellectual exertion is more easy and free after its use. Dr. W. H. Draper, of this city, has given small doses of the medicine to two well-known clergymen, with the result of restoring their power of extemporaneous speaking.

Cantharides excites the spinal cord, and seems to act more particularly upon its lower portion, manifesting its action by the development of symptoms especially connected with the genito-urinary apparatus. It is useful in cases of bladder paresis, of impotency, or simple genital inertia.

Exercise, both active and passive, is indicated in conditions of paralysis or paresis, or in simple spinal debility. Much of the passive exercise we make use of is obtained by means of electricity, which will be separately considered. Exercise should never be pushed to exhaustion; and I would have you bear in mind that exertion more easily produces exhaustion in the subjects of nervous diseases, and in the insane especially.

Original Communications.

HYDRO-CHLORAL BY THE RECTUM IN THE VOMITING OF PREGNANCY.

By D. B. SIMMONS, M.D.,

CHIEF SURGEON TO KEN HOSPITAL, YOKOHAMA, JAPAN.

We do not remember having seen hydro-chloral, by the rectum, recommended in the vomiting of pregnancy.

Should this application of it, however, not be new, the results of the following observations may still have their value for or against the conclusions already arrived at.

Aware of the suddenness with which this symptom sometimes ceases, after all hopes of saving the mother, without emptying the uterus, have failed, and that, too, without being able to attribute it to any of the numerous remedies which usually have been tried, *except the last*, we have waited patiently for a third case before venturing a decided opinion as to its value.

Although we saw these cases only in consultation, especial care was taken to obtain their correct histories.

Case I.—Patient æt. 30; third child. Commenced excessive vomiting during the fifth week of pregnancy, which continued, with the usual intermissions, till the tenth week, when we saw her. For several days previous the nausea and vomiting had been almost constant, both day and night. She had become very much emaciated and unable to sit up, even in bed, not having retained any nourishment on the stomach for several days. All the usual remedies had been tried, such as oxalate of cerium, hydrocyanic acid, hypodermic injections of morphine, etc., but with little benefit.

We suggested the administration by the rectum,

morning and evening, of 30 gr. of hydro-chloral on mucilage, this to be increased if there was no improvement, or if the specific effect of the medicine was not too decided. An amelioration of the symptoms was obtained by the first injection, and a still more satisfactory one followed the administration of the second.

The second day's use of the remedy arrested the vomiting, except at long intervals, and on the third day both nausea and vomiting ceased entirely. There was no return of the symptom. Some nourishment was taken and retained, even on the second day. From this time the patient rapidly gained strength, and was delivered of a healthy child at term.

CASE II.—Patient æt. 32; second child. Excessive vomiting commenced on the fifth week. Saw her at the end of fourth month. During this time there had been frequent periods of four to five days, of comparative freedom from sickness, when nourishment could be taken. For ten days previous to my seeing her, however, she had been unable to take any solid food whatever, and but the smallest quantity in any form. The nausea was constant, and the vomiting very frequent and prolonged. She was very weak and much emaciated. No medicine afforded any decided relief. We advised 30-grain doses of hydrochloral by the rectum, morning and evening as before. The first portion afforded sensible relief, as in the previous case, to the more distressing symptoms. The administrations on the second day were followed by still more decided results. Still more on the third, and on the fourth the nausea and vomiting had ceased entirely. Nourishment was now taken in moderate quantities, and the patient was soon able to be up again. This case proved more obstinate than the first, as there was a return of the symptoms two or three times, but they were easily controlled by a repetition or two of the injection.

CASE III.—Patient æt. 20. First child. Vomiting in an unusual degree; commenced on the sixth week of pregnancy, and we saw her on the ninth. The history of this case was similar to the preceding. We found the patient very weak and emaciated, and unable to retain food on her stomach of the simplest kind.

The nausea was persistent and the vomiting very harassing. Some of the ordinary remedies had been tried, but to no purpose. We prescribed the hydrochloral as before, and with the same result. On the third day the nausea and vomiting had ceased; the patient took a fair amount of nourishment, and has had no return of the symptom.

A fourth case presented itself, of a similar character, not a week since. The patient is in her eighth month of pregnancy.

Suddenly excessive vomiting supervened, with inability to retain the least food on the stomach. Decided hysterical symptoms appeared at the same time, showing the vomiting to be undoubtedly of a nervous origin. 30 grs. of hyd. chloral were administered by the rectum, which had the effect of quieting the gastric irritability, so that on a return of the hysterical symptoms some hours after, a dose of 20 grains more, administered by the stomach, was retained without difficulty.

The first three cases we consider as typical of this form of disease. That the relief obtained was due directly to the remedy employed, we have not the slightest doubt.

Should another opportunity offer for a trial of this plan of treatment, we have decided to commence with larger doses, being convinced that a decided impression, produced by the medicine at first, will require its repetition but two or three times to put an end to the disease, for the time at least.

We believe that hydro-chloral, administered in this manner, will relieve most cases of nervous or sympathetic vomiting, where there is no inflammation especially. Even in strangulated hernia, on theoretical grounds, it ought to act well, not only in checking the vomiting, but in producing relaxation. We should give it a trial also in cholera.

THE ACTION OF QUININE AS A CARDIAC SEDATIVE IN ARRESTING INTERNAL HEMORRHAGE.

BY SALVATORE CARO, M.D.,

NEW YORK.

THE effects of the administration of quinine in quieting the action of the heart is pretty well recognized by all who have had their attention directed to the subject. In cases of prolonged and obstinate hemorrhages, where all the ordinary means fail in arresting them, we have, in this peculiar property of quinine, a remedy of which we cannot speak too highly. As illustrations bearing upon this point, I beg leave to present the following cases, premising that their recital in detail is warranted as proving that none of the ordinarily recognized methods of treatment were neglected; and that the use of the quinine was the explanation of the ultimate success in each:

Early in the morning of June 26, 1871, I was hurriedly summoned to attend Thomas Walker, horse-jockey, 28 years old, and of nervo-lymphatic temperament. I found him bleeding profusely from the right nostril. I was informed that he had been struck on the bridge of the nose. Examination revealed a great swelling of the face from the eyebrows to the upper lip, and cyanosis of the external integuments. There was no abrasion of the skin, nor fracture of the nasal bones. Although he had lost an immense quantity of blood during the night, his pulse continued quite full and upwards of 100 per minute. His skin was almost blanched, and the veins could be easily traced, being more than ordinarily full of apparently dark blood. I washed the accumulated blood from his face, and then stuffed the nose with equal parts of tannin and powdered matico leaves; applied (iced) cloths to the bridge of his nose, and gave internally half a grain of opium every two hours. This stopped the bleeding until 6 P.M., when it returned as bad as before. The same remedies were again used, and the opium was increased to three-fourths of a grain.

He rested until 6 A.M. the day following, when the blood reappeared. This time I plugged the nose anteriorly with the same powder on coarse lint. 4 P.M. the bleeding returned, finding its way through the posterior nares into the mouth. In consultation with Dr. J. L. Little, we decided to plug the nose posteriorly, which was done by Bellocq's canula. Ten drops of the tincture of iron were given every four hours. At 8 and 11 o'clock of the same evening respectively, the patient bled from left nostril, but this was arrested by the above powder.

June 28th, 6 A.M.—He bled profusely from both nostrils, particularly the right. I removed the plug, washed the parts with tincture of iron and water, reapplied a larger plug to the right nostril posteriorly, and stuffed the left anteriorly with tannin and alum. In place of iron, thirty drops of tincture of digitalis every two hours were administered, the pulse being

then as full as ever. He was taking plentifully of beef-tea.

June 30th, 1 P.M.—The plugs removed, owing to copious and very offensive discharges, accompanied by painful sensations in the cavity of the nose. Occasional dressings of pulverized persulphate of iron kept the blood from reappearing.

July 2d, 1 P.M.—Blood returned in greater quantity than heretofore. For the third time the nose was plugged posteriorly. Up to this time the loss of blood was estimated at about four pounds. Digitalis was substituted by the fluid extract of veratrum, three drops every two hours.

July 3d, 1 P.M.—Hemorrhage returning, plugs saturated with liquor ferri persulphatis arrested it. 3 P.M. I was again summoned to find my patient in syncope; pulse very feeble. Epistaxis arrested, but blood oozing from the right ear. Through a glass tube, I blew in powdered tannin and iron, and ordered bladders of ice to be applied to the head, round the neck, and all over the thorax; also a tablespoonful of whiskey every two hours, with beef-tea and cream, and discontinued the veratrum. He rallied a little, although bleeding every three or four hours in quantities of four to six ounces, which was checked by washings of water and liquor ferri persulphatis.

July 9th, 9½ A.M.—There was bleeding from right nostril about four pounds, and from the right ear a tablespoonful. This was easily stopped by the iron wash, and the ears with powdered tannin and iron. He was then taking internally every two hours dr. doses of the fluid extract of the Peruvian bark. 7½ P.M. Bled about three pounds from right nostril. July 10th. 6 A.M. Bled about four pounds; stopped as above. 4 P.M. Bleeding returned as freely as ever, and arrested as before.

July 11th, 5 A.M.—Bleeding returned, and was arrested by the same wash. *Teaspoonful* doses of fluid extract of ergot and twenty drops of the elixir of vitriol were given alternately every two hours. 6 P.M. Bleeding, but stopped by the same remedies. July 12th. 4 A.M. Bleeding returned with more alarming symptoms than heretofore from both nostrils and right ear. Plugging in this case had not the least desired effect, but rather a tendency to the return of the hemorrhage, by the constant applying and removing of which my patient not only complained, but in my opinion the bleeding was increased by tearing off the newly formed clots.

So far, all remedies failing and the life of my patient momentarily threatened, I determined to abandon the above treatment. It may be proper to state that during this time I discovered him suffering from palpitation of the heart. Examination of the thorax revealed a very distinct and loud cardiac murmur with mitral regurgitation, with hypertrophy and quick action of the heart. The heart measured seven and a half inches in length and five inches in width. On watching him for a few minutes before the return of epistaxis, I could distinctly see the precordial region swell, the heart become tumultuous in action, and the blood propelled to the carotid arteries. The jugular veins became turgid, and the neck and face assumed a cyanotic hue, which condition was immediately followed by epistaxis. Digital pressure upon the carotid and facial artery had very often modified the velocity of the hemorrhage. Such being the condition of my patient, I removed all dressings except the ice over the thorax, washed the nose with glycerine and carbolic acid, and directed my attention to the condition of the heart.

July 12th, 4 P.M., the fifteenth day of the epistaxis, I prescribed two grains of quinine every two hours until July 13th, 5 P.M., the patient taking in all twenty-five grains. No ill effects were produced, and the hemorrhage was totally arrested.

Finding the pulse considerably reduced, I decreased the quantity of quinine to one grain every two hours, until the 14th, 6 A.M., using but six grains in twelve hours. This did not prove so beneficial, as he had a return of hemorrhage at 7 A.M. I was compelled to increase the quinine to three grains every hour, which arrested the blood as before; seventy-five grains were thus used in twenty-five hours.

July 15th, 10 A.M.—Hemorrhage returning with greater severity, I increased the dose to five grains every hour. In twelve hours he thus consumed sixty grains. 10 P.M. of the same day, having another alarming attack of hemorrhage, I determined to give ten-grain doses every hour until the 17th, 12 M., using thus two hundred and sixty grains in the space of twenty-six hours. By this time the hemorrhage having ceased, and the heart appearing calm and regular, I ordered the ice removed, my patient washed, and permitted to walk about the room.

From this date until the 23d, 12 M., quinine was reduced to two grains every three hours, consuming in these doses ninety grains in one hundred and forty-four hours.

From July 12th to the 23d five hundred and twenty-one grains of quinine were consumed.

The principal noticeable symptom was a decrease of heat, particularly in the hands and feet. In the cavity of the axilla, the thermometer, previous to the use of quinine, marked 103°F., even after profuse hemorrhage, but after small doses it would fall to 99° F., rising when the quinine was losing its effects. At ten-grain doses the thermometer in the cavity of the axilla marked 94½° F.; 95° F. in the mouth and anus; 93° F. in the inguinal region, with the leg flexed over the abdomen and between the legs on the perineal region; 90° F. in the palm of the hand; 91° F. at the flection of the forearm; 88° F. between the toes, and 89° F. in the popliteal region. This extreme algid state lasted about two hours, and on removing the ice from the body heat returned. He never complained of feeling cold, but insisted upon keeping his feet out of the window. When the quinine was decreased, heat gradually returned, never reaching 99° F.

All mechanical and therapeutical agents being suspended, and epistaxis arrested only by the internal use of sulphate of quinine, I may justly give to this drug the name of styptic or general sedative of the cardiac organ. I have had occasion to observe the sedative action of quinine on hypertrophy of the heart producing copious hemoptysis. Where all the well-known remedies used under the best form and advice have failed, quinine alone, in five-grain doses every four hours, has quieted the heart, arrested the hemoptysis, and given temporary relief.

In the three following cases, quinine was the only remedy to arrest hemorrhage:—

Mr. P., aged 38, robust, sanguine temperament, Nov. 24th, 1873, was suddenly seized with profuse hemoptysis. Iron, ergot, and elixir of vitriol failing, five grains of sulphate of quinine every hour instantly arrested it. The use of five grains of quinine three times a day was continued in order to maintain the pulse at about seventy-five per minute.

Mrs. D., a very robust and sanguineous temperament, Dec. 8th, 1873, upon lifting a heavy box was seized with hemoptysis, which resisted all known remedies for three days, yielding to five grains of quinine every hour.

Miss S., aged 28, nervous temperament, for the past three springs has been troubled with bronchorrhagia, of very little account. On the 3d of March, 1874, the usual affection returned in a more alarming manner, and after the failure of the old remedies, she was relieved instantly by five grains of quinine as above.

The amount of quinine used in the first case was fifteen grains; in the second, twenty-five grains, and twenty in the third case, besides the continuation of five grains three times a day for three days. In uterine hemorrhages quinine has proved equally successful; but the space allowed me in this paper being limited, prevents me from enlarging upon the subject. The following experiments and views of others may, however, elucidate the subject.

Injecting a solution of quinine (eight grains) under the skin of the right hind leg of a small dog (95° F. in ano), the first observable symptom was the lowering of the temperature four degrees. I immediately opened the chest, found the heart relaxed, the cardiac impulse weakened, and the blood less rapid and voluminous. I could also see the arteries undergo a change of volume; the capillaries particularly appeared as if they were empty and atrophied. In the case of a second dog of the same size, fifteen grains were injected; temperature lowered eight degrees, and the animal died shortly after with paralysis of the heart. On opening the chest, the heart was found completely relaxed, as soft as a rag, and with scarcely any blood in the left ventricle. Operating upon a third dog, three grains were injected. Temperature rose one degree, and the pulse became more frequent. On opening the chest the heart was found tense and beating rapidly. The blood being microscopically examined before the use of quinine, the corpuscles were found thin and running about; when cinchonized, were shrunken in various irregular forms; indented or jagged at the edges, and very much altered in shape.

The lowering of the temperature after the use of quinine has been ascertained by Lewizky, Ranke, Kerner, Shulte, Zuntz and Sharrenbrich. They are of opinion that the drug acts upon the intercardiac nerves, producing an irritation of the peripheric extremity of the valves, paralyzing the peripheric extremity of the motor nerves of the heart and the motor muscular system of the same, decreasing its activity and producing diminution of the blood-pressure and peripheral heat.

Cohnheim says that quinine has the power of arresting the motion of the white corpuscles of the blood, preventing the development of animal heat, and reducing blood pressure. Bintz thinks that quinine in high doses paralyzes the action of the heart and arrests the motion of the white blood-corpuscles, by the diminution of the oxidizing power of the red corpuscles, and in small doses acts like a tonic by increasing the cardiac action. These observations have been corroborated by Heller and Zahn. Traube opines that the relaxed condition of the heart is produced by the stimulating action of the quinine upon the vagus.

643 Lexington Avenue, N. Y.

Cremation.—The proposal that cremation should be substituted for burial has met (a correspondent of the *Pall Mall Gazette* writes) with a most favorable, it may be said enthusiastic, reception in Switzerland. A meeting, held recently at Zurich, for the discussion of the scheme, was crowded, and numbers had to be sent away from the doors because there was no more room. Professor Kinkel was the principal speaker, and in order not to disappoint those who could not hear, the addresses were published.—*Br. Med. Jour.*

CONTRIBUTION TO LARYNGEAL PATHOLOGY.

SINGULAR CAUSE OF UNILATERAL PARESIS OF THE VOCAL CORD.

By EDGAR HOLDEN, A.M., M.D.,

Newark, N. J.

Miss ——, æt. 26, a tall, dark-complexioned lady, a teacher by profession, and one of a family of marked tuberculous tendencies, was brought by her physician for laryngoscopic treatment in November, 1871. Acutely sensitive to the suggestion afforded by a cough, she had been for several months alarmed by frequent colds, accompanied by hoarseness, and even complete aphonia. Indeed, this condition had existed for nearly a year, and a short, harassing cough, loss of appetite, and occasional fever had given rise to the gravest apprehensions.

Examination of the lungs exhibited considerable bronchial irritation, and a small spot of consolidation at the apex of the right lung, without evidence of softening. Temperature, 100; pulse, 90, regular and compressible; aphonia complete; cough harassing, short, and ineffectual. The larynx under the light was found intensely congested, and so tumefied that the vocal bands were seen with difficulty. The arytenoepiglottic folds were also swollen, although not prominently, nor was the swelling so distinctly characteristic as in the early stages of phthisis. The capitulæ Santorini were each surmounted by a little spot of erosion, evidently quite superficial. Under local treatment, within a fortnight, much of the distress had disappeared.

It is worthy of remark that after the second application (which was made with a brush, and was Marcet's solution of iodine and iodide of potassium in olive oil), the voice immediately returned, lasting about an hour, and from that time it was always possible to restore it instantly by a proper application, although it was retained but a short time at each brushing.

In brief, after the cure of the long-standing laryngitis and the disappearance of the cough, the voice would not remain fixed, and after the use of various tonics a change of air proved immediately successful. Relapse, however, followed return to the city, and rest at home from her labors as teacher made but little difference in the symptoms. It was repeatedly necessary to combat the tendency to inflammation, which recurred under perplexing circumstances, and without apparent cause.

In March, 1872, whether overlooked or not in previous examinations, the right vocal cord was seen to come up lazily into line, and fall back without vibration. There was now not a continuous aphonia, but occasional attacks with intervals of two or three days.

This condition gave a key to the difficulty. There was evidently paralysis of the adductors of the right cord, and the application of the faradic current with Mackenzie's electrode to the muscles confirmed the opinion. Strychnia was given in gradually increasing dose, using a two-grain solution, beginning with ten minims (one twenty-fourth gr.), three times daily, with directions to increase one drop each day, until stiffness or cramp in either the neck or limbs was experienced. So long as the patient was under its influence there was no aphonia, and she gained flesh and strength, and in fact was better in general health than for several years. It was, however, found necessary to increase the dose steadily, as trouble was threatened; and during my absence from town for a few weeks the patient attain-

ed the enormous dose of a dessertspoonful (probably not more than one and one-half drachms, yet at least ⅛ of a grain three times daily) without any unpleasant symptoms; in fact, there followed only a pleasurable exhilaration. Upon reducing the dose the aphonia returned, and both the direct and induced galvanic current gave but temporary relief. A battery of alternate plates of zinc and copper was adapted to the external aspect of the larynx with better success, and either this or a Pulvermacher's chain improved the voice, *while worn*, but it totally disappeared and hyperæmia quickly supervened when they were laid aside.

This paralysis was strictly local, and with the single exception of a drawing of the uvula toward the affected side for a short period, no other impairment of motion or sensation occurred.

Pain in the larynx, which was not very infrequent, always yielded at once to either the Franklinic, direct or induced galvanic current, and it seemed to matter but little whether passed from the hyoid fossa to the anterior surface of the thyroid, or internally by means of the intra-laryngeal electrode.

These attacks of pain were, however, only occasional.

Aphonia, whether coming suddenly or by slow degrees, was always accompanied from its outset with a singular general weakness, such as is not very uncommon in even slight laryngeal diseases.

In searching for the key to this singularly localized trouble, one feature escaped attention, viz., the fact that whatever the change of air was on any occasion—that is, whether to a near or remote point—the result was always the same, *the voice and strength returned on the second day*, provided in each case the hyperæmia had not become excessive. But after reviewing the possible causes of this unilateral paralysis, the weakness of the tensors, suggestive of a tubercular diathesis, the development of some cerebral disease, the pressure of some morbid growth upon the pneumogastric or its motor branch, the presence of some blood-poison, as from diphtheria, etc., the fact mentioned suggested at once the cause, viz., some toxæmic agent in the locality of her residence; and that this agent was the vapor from a neighboring patent-leather or enamelled cloth factory was made apparent when it was found that, after an absence from home, an immediate relapse followed return *only* if the manufactory was running, but not otherwise. Farther than this; however long-continued or perfect had been the restoration of the voice, one night's sleep at home often sufficed to destroy it altogether.

Acting upon this belief, recovery has been most satisfactory.

It might be added for the information of those unfamiliar with the branch of manufacture referred to, that upon damp days and at certain seasons of the year a peculiar suffocating sensation is experienced by strangers when in the vicinity of the factories, quite similar to that which occurs upon inhaling pure nitrogen, but that no tendencies have as yet been discovered in the emanations to develop disease.

[NOTE.—We gladly publish the foregoing case, which calls definite attention to an important subject, viz., injurious effects of emanations from factories near dwelling-houses: but its interest does not lie in singularity, as the author supposes. On the contrary, paralysis of the vocal bands is very frequently due to irritation and inflammation of the mucous membrane, and, we fear, this frequently depends on some such cause as in this case.—ED.]

THE ANNALES DE GYNÉCOLOGIE is a new French periodical, edited by MM. Gallard, Pajot, and Courty, with Dr. Leblond for its Editor-in-Chief.

FRACTURE OF THE PETROUS PORTION OF THE TEMPORAL BONE, WITH RECOVERY.

BY JOHN Q. ADAMS, M.D.,

CARMEL, N. Y.

THE following case is reported as a contribution to those rare fractures at the base of the skull which are usually regarded as fatal:—

Mrs. T——, American, healthy, aged 52 years, weight 200 pounds, was thrown from her carriage, striking upon the head. This occurred on the 25th September, 1873. Half an hour afterwards she was unconscious, nearly pulseless, surface pale and cold, pupils dilated, hemorrhage from right ear profuse. There was a puffy tumor over the parietal bone of the right side; no solution of continuity in the soft parts. 11 P.M., vomiting came on an hour after the injury; partial reaction has come on, but consciousness has not returned.

26th, 7 A.M.—Has been in a deep stupor most of the night; vomited occasionally; hemorrhage from the ear continues; pupils a little dilated, answering the light; skin hot, face flush, pulse 84. 12 M., pulse 64; pupils contracted, influenced by light; breathing with a peculiar puffy, blowing expiration, but not stertorous. 11 P.M., consciousness returning; complains of nausea and headache. Ordered to take pil. cathart., c. No. iv.

27th, 7 A.M.—Had two stools during the night; nausea less; complains of the headache; wakes occasionally without being aroused; recognizes friends, but cannot call names; ideas confused. 10 P.M., recollects names with considerable effort.

28th, 7 A.M.—Slept well; begins to worry about her household; discharge from the ear, which has continued from the first, and apparently bloody, is now becoming very perceptibly serous; intellect sluggish; no nausea. Ordered sal. Rochelle ʒ i. 9 P.M., had two stools. Slept some. Pulse 60; skin natural.

29th, 5 A.M.—Slept well during the night; discharge from the ear profuse—clear, limpid serum. The quantity discharged during the last twenty-four hours was from two to three ounces. 7 P.M., right side of face paralyzed, considerable swelling, and extreme tenderness; unable to close the eyelid; vision dim and wavy; deglutition difficult. Noticed a peculiarity of the countenance yesterday, but waited developments without noting. Headache confined to right side; no nausea; pupil of right eye larger than the left; both answer light. Pulse 76, moderately full and hard. Ordered tinct. aconite gtt. iv. every four hours; poultice the face. 9 P.M., pulse 64, tongue slightly coated; temperature good; serous discharge from the ear profuse all day, becoming very little colored—no diminution in quantity. Asks for food, but when it is brought her dreads to partake of it, and sets it aside, complaining of dryness and stiffness of the fauces.

Oct. 1st, 10 A.M.—Discharge from the ear more profuse and more colored; otherwise head and face symptoms the same; pulse 56; tongue clean and moist. Discontinue the aconite, poultice the face, syringe the ear with soap and water. Sal. Rochelle, ʒ ss.

2d, 9 P.M.—Bowels moved twice to-day; vision is improving; pupil of right eye still dilated; hears a little with the right ear; ear discharging freely a bloody serum. Pulse 68, soft; skin natural, tongue clean.

7th.—Discharge from the ear nearly done; paralysis of the face and eyelid unchanged; face less swollen

and less tender; deglutition improving and appetite fair; vision nearly restored; sleeps well; walks about the house; headache gone. Pulse 64; bowels require laxatives.

11th. Symptoms as at last writing, except complains of pain in the back, and extending down the thighs. Regulate bowels, and apply rubefacient liniment to the spine. Left her hotel at 2 P.M. to ride fifteen miles.

Nov. 6th.—Paralysis and general condition improving; complains of occasional headaches and strange sounds in the ear; able to attend to her usual household duties.

Jan. 4th, 1874.—She writes that she is as well as she ever was, except the impaired hearing and occasional pain in the ear, which are both improving slowly.

The most important symptoms in this case are the serous discharge from the ear, the hemorrhage and the paralysis. The serous discharge from the ear was of all the most diagnostic of fracture of the base of the skull. This discharge gradually took the place of the hemorrhage; on the third day after the injury becoming very apparent, and on the fourth perfectly clear, and amounting to two ounces and perhaps three in the twenty-four hours. On the evening of the fifth day the discharge again became tinged with blood. From this time it continued, gradually diminishing in quantity and color, until the thirteenth, when it ceased altogether. The origin of this serous fluid is now very generally believed to be from within the arachnoid membrane, and hence the cephalo-spinal fluid. This fluid could not be discharged through the ear without fracture of the petrous portion of the temporal bone and laceration of the arachnoid membrane. The point at which this membrane would be most likely to be ruptured is in the process which is thrown off as a sheath or cul-de-sac upon the auditory nerve or portio mollis of the seventh pair as it enters the meatus auditorius internus. Still, there has been another symptom coexisting with the serous discharge, which would, I think, render it very probable that the rupture of the arachnoid was more extensive than merely across the cul-de-sac covering the auditory nerve, and that is the profuse and long-continued hemorrhage. If we consider that the rupture of the arachnoid was confined to this process, we must also suppose that the hemorrhage was from the auditory artery accompanying the nerve, which would have been scarcely possible when we take into account the extent of the hemorrhage. The hemorrhage must have amounted, I think, to nearly a quart during the first twenty-four hours. It would seem, therefore, more likely that the hemorrhage came from some larger vessel than the auditory artery. Of course it is not possible to know precisely where it did arise, but from the position of the lateral sinus, it would not be very far-fetched to suppose that it came from this vessel or some of the large veins leading to it. The lateral sinus is situated on the internal surface of the mastoid portion of this bone—the temporal—in close proximity to the base of the petrous cone and directly opposite the tympanum. A fissure through the thin shell of bone overlaying the tympanum, rupture of the arachnoid and walls of the sinus or some of its tributaries, would account more satisfactorily for the existing symptoms. The extent of the hemorrhage, and more especially its duration, is another diagnostic sign of fracture of the base of the skull. The membrana tympani must, of necessity, have been lacerated.

Next, the paralysis. This occurred in the muscles of the face and the eyelid of the right side, the side corresponding to the injury as indicated by the other symptoms. It appeared on the fourth day after the injury, and therefore probably was not a direct and primary result, but rather the result of inflammatory action affecting the facial nerve. This last theory would be strengthened by the fact that there occurred with the paralysis swelling and tenderness of the whole right side of the face. But the paralysis was not confined to those parts supplied by the facial nerve. The muscles of deglutition as well as sensation in the mucous membrane of the fauces, suffered to some extent, though only partially palsied, and only for seven or eight days. Was the lesion producing the paralysis within the cranium or external to it? In the case of the facial paralysis, I should be inclined to the external view of the question, that of injury to the peripheral branches of the nerve by inflammation and swelling. In the case of the affection of the fauces and larynx, the opposite theory would seem to be true, as there was no perceptible swelling of the fauces, nothing abnormal to the eye except slight increased vascularity and dryness of the mucous membrane. Prof. Gross, in speaking of paralysis of the palate and uvula, says that it only occurs when the injury that gives rise to it is within the cranium and close to the petrous portion of the temporal bone. He also locates the injury in the filaments of the spheno-palatine ganglion. This ganglion, the spheno-palatine, or Meckel's, is situated in the spheno-maxillary fossa, and sends several branches to the palate, uvula, tonsils, and mucous membrane of the fauces, while its communicating branches are the vidian, carotid, and petrosal branches, which are distributed in the immediate vicinity of the petrous portion of the temporal bone.

There is one other nerve that may have been disabled in this case, the glosso-pharyngeal. This nerve, one of the eighth pair, arises, with the facial and near the auditory, from the groove between the corpus olivare and restiforme, and emerges from the skull through the foramen lacerum posterius, and is distributed to the mucous membrane of the fauces, tonsils, and stylo-pharyngeus muscle, which is the middle constrictor of the pharynx. This nerve, from its origin to the ganglion of Andersch, situated in the jugula fossa, is purely a sensitive nerve. After leaving this ganglion, it is supplied with branches from the facial and spinal accessory, both of which are motor nerves, thus changing the glosso-pharyngeal into a mixed nerve, and accounting for the impaired motor and sensitive forces manifest in this case. The proximity of origin of these three nerves, the auditory, facial, and glosso-pharyngeal, and their distribution corresponding to the parts paralyzed, as they do, would seem to offer strong proof that the glosso-pharyngeal suffered injury with the others.

Progress of Medical Science.

THE MUCOUS MEMBRANE OF THE LARYNX.—M. P. Coigne publishes in the January number of the *Archives de Physiologie* some researches on the mucous membrane of the larynx which are of much interest. He notices, first, the existence of a sub-epithelial, reticulated layer, analogous to the lymphoid tissue beneath the mucous membrane of the small intestine; also certain lymphoid bodies, which have hitherto been unknown, similar to the closed follicles of the small intestine. Great as may be the anatomical interest of this discovery, its pathological importance is greater, for the presence of these bodies may account for the ulcerations of the larynx which occur during the course of pyrexias, such as typhoid fever. Again, M. Coigne has observed on the

free border of the true vocal cords certain papillæ, containing vascular loops, and probably a nervous twig also. With the greater development of these papillæ on the anterior half of the cord may be associated the greater frequency of papillomatous growths at this part of the larynx. Besides the above, the author describes also some follicular glands whose ducts take an oblique direction so as to converge towards the free edges of the true vocal cords, with the manifest object of moistening a part liable to become dry. The closed lymphoid glands are situated chiefly beneath the mucous membrane of the false vocal cords and the sacculis laryngis. Further, at the free border of both true and false vocal cords the epithelium ceases to be ciliated and becomes squamous in character.

Treatment of Rickety Deformities of the Legs by Operation.—At the meeting of the Royal Med. and Chir. Society, on Jan. 27 (*The Doctor*), Mr. Howard Marsh gave an account of four cases of rickety deformity of the legs which he had treated by operation. In two of them the curvature was outwards, in one outwards and forwards, and in one almost directly forwards. In the first three cases a tendon knife was passed down to the tibia, where the concavity of the curve was greatest, and the periosteum was divided transversely. A fine saw was next introduced and the bone partially divided, and then, by a somewhat suddenly applied force, snapped across; the fibula was either bent or broken, and in one of the operations the tendo-Achillis was cut.

In the two cases in which the curvature was outwards the legs are now straight; in the boy whose curvature was outwards and forwards, and in whom the treatment was interrupted by an attack of scarlet-fever, the deformity, although much diminished, is not wholly removed. In none of the patients was the operation followed by any serious symptom, and, except in the boy who had scarlet-fever, convalescence was complete in about a month. In him it was complete in about six weeks.

In the fourth case, in which the bones of the leg were curved almost directly forwards, and in which the deformity was so extreme that the boy could walk only a few steps at a time, a wedge of bone was taken out of the tibia with a chain-saw, the tendo-Achillis was cut, and the fibula broken in one leg and cut with bone-forceps in the other. These operations were not followed by any dangerous symptoms, but small disks of bone became necrosed and were slowly separated from the cut ends of the tibia. Union was firm in one leg in three months; in the other, in which it was much delayed by the tedious separation of necrosed bone, in six months. The legs are now straight and the boy walks without impediment.

Relation of Renal Apoplexy with Cerebral Hemorrhage.—Dr. Augustus Ollivier remarks that the influence of chronic affection of the kidneys on the production of cerebral hemorrhage is well known, but in the present essay he proposes to consider the converse fact, namely, the relation of cerebral hemorrhage on the production of certain renal lesions. Among the cases of this nature which have fallen under his observation are the following:—1. A man aged 74, attacked with apoplexy, with right hemiplegia of the limbs and face. In twenty minutes after the attack the urine was found to have become albuminous; death took place on the fourth day. On post-mortem examination effusion of blood was found to have occurred under the meninges, and a clot had formed under the left optic thalamus and corpus striatum, which had burst into the corresponding ventricle and had made its way into the middle ventricle and the opposite lateral ventricle. The cerebral peduncles, cerebellum, pons, and medulla oblongata were healthy. Both kidneys, but especially the right, were found to be congested. 2. An attack of apoplexy in a man aged sixty-eight, with hemiplegia of motion and sensation on the right side; ten minutes after, coma. The urine was normal up to the time of the appearance of the coma, but then began to contain albumen. Death occurred in the course of nine hours. The autopsy showed a large hemorrhage into the white substance of the left cerebral hemisphere, which had burst into the ventricles, and even entered the upper part of the left aqueduct of Sylvius; both kidneys were congested, the right highly so, and with an ecchymotic spot upon it. M. Ollivier reports several other similar cases. He then proceeds to give the details of numerous experiments he has recently performed on rabbits, showing, in accordance with the statements of Bernard, Brown-Séquard, and others, that puncture of the floor of the fourth ventricle is almost constantly followed by the appearance of albumen in the urine. The cause of this is not, however, quite clear; some, with Schiff, considering it to be due to paralysis of the vaso-motor nerves; others, with Brown-Séquard, to be due to spasm of the veins, or of both arteries and veins, causing engorgement and rupture of the capillaries. M. Ollivier, in conclusion, points out that albuminuria of cerebral origin is of more frequent occurrence than is generally admitted, but that our present knowledge does not enable us, from the existence of albuminuria in cases of cerebral hemorrhage, to localize exactly the seat of lesion.

At the same time, when the symptoms of lesion of the medulla oblongata are deficient in an apoplectic patient, it may be said that the presence of albumen in the urine indicates either a hemorrhage situated at the base of the brain, or an extensive hemorrhage elsewhere, exerting compression on the base. In all instances it must be regarded as a very serious symptom.—*Archives Gén. de Méd.—The Practitioner.*

The Action of Purgatives.—M. Vulpian has completed some new experiments which confirm the results of MM. Legros and Onimus (*Recherches Experimentales sur les Mouvements de l'Intestin*) as well as others obtained by M. Benoit, and reported by him in the *Courrier Médicale.* Vulpian concludes that sulphate of magnesia and other saline purgatives produce a real intestinal catarrh, by which large quantities of liquid are made to transude into the canal, though a portion is absorbed and removed by the kidney. For this reason these substances are contra-indicated in the vesical catarrh of the aged or in phosphatic gravel, which they would augment. Salines do not increase peristaltic action; but jalap, according to these experiments, did increase this movement as well as produce intestinal catarrh, chiefly of the larger bowel. Here, then, a distinction is furnished between these purgatives.—*The Doctor*, April.

Microscopic Appearances of the Blood and Urine which Contraindicate Removal of Melanotic Tumors.—Besides other evidences which may exist of disease of the viscera, M. Nepveau claims that the conditions of the blood and urine are important in determining the propriety of undertaking an operation for the removal of melanotic tumors. In the blood, he says, the leucocytes are increased in number: fifteen, twenty, even forty of them being distinguishable in the field of a microscope, with a No. 3 ocular and 7 objective of Hartnack. They are, moreover, filled with dark granules. The serum presents reddish-brown granules and flexible casts without consistence, and

granular, resembling hyaline casts, and appearing to be derived from the capillaries; moreover, the red globules, when seen *en masse*, have a sepia tint more or less marked.

The urine is rather dark in color, and the addition to it of nitric acid or bichromate of potash gives it a darker tint. Examined under the microscope, the deposit shows cylindrical casts, resembling those of albuminuria; or irregular masses of brownish granules. If the urine is evaporated upon a glass dish, grayish granules surrounded by variously formed crystals are apparent.—*La Tribune Méd.*

TREATMENT OF TRICHIASIS.—M. Menu describes a new operation for the relief of trichiasis, which consists in making an incision parallel to the border of the lid, at some distance from its edge, and through the whole thickness of the skin. The fasciculi of the orbicularis exposed on reflecting the integument upwards, are excised, and the tarsal cartilage is laid bare. The flap containing the roots of the cilia is now dissected back as far as to the edge of the lid, which is not injured. A thread is passed, by means of a curved needle, through the suspensory ligament of the tarsus, then under the inferior flap as far as to the free border of the lid, at which point it issues on the level of the cilia, and the loop is tied. This is done at several points, and the ends of the threads are brought up over the forehead, and fixed by a strip of plaster.

THE OPERATION OF REPOSITO CILIORUM FOR TRICHIASIS.—This operation—recommended by Celsus—has again been brought to the attention of the profession by Argyll Robertson, M.D., who writes to the *Edinburgh Medical Journal* of May. Few text-books make any mention of this simple method, and its reintroduction, some twelve years since, is due to Dr. Snellen, of Utrecht. The following is the method of operating: A very fine curved needle has the two extremities of a very fine waxed silk ligature (or hair, as Celsus directs) passed through its eye. The needle, being firmly grasped by suitable forceps, is then passed through a narrow fold of skin, at the very margin of the lid, close to one of the inverted eye-lashes. The point of introduction should be external to the point of emergence of the eyelash, but as close to it as possible; and the needle should be brought out after passing through about ¾‴ or 1‴ under the skin. The needle and ligature should be drawn through until a small loop alone remains, when, by means of a fine pair of forceps, the eyelash is passed through the loop. Traction is then made on the ligature, and the loop with the entangled eyelash is drawn through the tunnel in the skin.

A METHOD OF TREATING TINEA TONSURANS.—Dr. Edgar A. Browne, writing to *The Practitioner* of May, recommends the following method of treatment as requiring no attention on the part of a nurse or parent, and needing only to be renewed at intervals of three or four days: "A margin of healthy hair is to be cut quite short or shaved round the patch. A brisk rubbing with the oleum picis rect., or some similar hydrocarbon, is the next stage, and the reddened and saturated patch is to be thickly dusted with a powder composed of tannin, iodine, and gum arabic. This is to be moistened with a few drops of the oil, and gently but firmly pressed into the skin with the end of a small cork. Repeat the process till the whole patch is covered with a layer of paste about an inch thick, and then allow it to dry. The firm, hard scab thus formed may be left undisturbed for three or four days, when it should be moistened, scraped off, and reapplied.

SULPHATES PRODUCTIVE OF GOITRE.—In a communication to the French Academy of Sciences, M. Bergeret points out the influence of the sulphates in the production of goitre. He states that before the year 1835 all the inhabitants of Saxon in the Valois were either goitrous or cretins. They then drank water derived from a bank of gypsum, which on analysis was found to furnish one grain of sulphate of lime per litre, besides some sulphate of magnesia. But in 1835 the potable water was derived from a spot situated far above the bank of plaster; and since then, according to M. Bergeret, goitre has much diminished, the children are no longer subject to it, and before long the disease will probably have disappeared. He also makes the somewhat singular statement, that under the conditions of excessive work a man has circulating in his blood an abnormal amount of sulphates, absolutely the same as if he had drank water loaded with gypsum; in support of which statement he cites various experiments, which appear to leave no doubt as to its correctness.

RÖTHELN, OR GERMAN MEASLES.—Dr. Robert Liveing, in a clinical lecture on this affection, records four cases, and then proceeds to make the following remarks: 1. The premonitory fever in German measles is generally mild, and resembles, in many subjects, though not in duration, that of common measles. There are more or less pain in the limbs, slight shivering, sore-throat, and often, though by no means always, coryza, redness of the conjunctiva, and sneezing. The characteristic feature of it, however, is its duration, which is seldom more than twenty-four hours, whereas in ordinary measles it is from three to four days. 2. The character of the eruption when it first appears is almost always described as "measly," that is, in small reddish patches. In the first instance the rash consists of small rounded collections of minute red papules, which after a time coalesce and form large irregular patches, just as in measles, but with apparently less tendency to become of a horse-shoe or crescentic shape. After a time the patches may all unite, and then the skin becomes to the naked eye of a uniform red color, closely resembling that of scarlet fever. The rash lasts longer than the rash of either measles or scarlet fever—from four to ten days. Its disappearance is followed by a desquamation of branny scales, though this is but slight in mild cases. 3. Among the most constant symptoms of this fever is the persistent, though not generally severe sore-throat. The tonsils are red and swollen, and remain in that state usually for some days after the rash has faded; indeed, the sore-throat is often the last symptom to disappear. Unlike that often associated with scarlet fever, it rarely leads to ulceration. 4. The presence of albuminuria is of not unfrequent occurrence, and occasionally leads to acute dropsy. 5. The disease propagates itself, and never leads to the production of either scarlet fever or measles in others, which is conclusive against the idea of its being a mild type of either. 6. It gives no protection to either measles or scarlet fever, nor do these diseases give any protection to those exposed to German measles. The existence of this disease, perhaps, accounts for some supposed errors of diagnosis, where a patient, said by the first practitioner who sees him to be suffering from measles, is pronounced by a second, under whose notice he comes at a later period, to be suffering from a slight attack of scarlatina.—*The Lancet.*

THE EFFECT OF BITCHES' MILK UPON RACHITIC INFANTS.—A curious fact was mentioned by Dr. Pernard at the late meeting of the French Society for the Protection of Infant Life, and is reported in the *Journal*

de Médecine et de Chirurgie, of March. In the Commune of the Drôme, at Montbrun-les-Bains, the women are in the custom of protracting the nursing of their children until the age of two and a half to three years, and all women who lose their nursling before this period has arrived substitute a young puppy. Now, these pups become rapidly rachitic and remain deformed, unless they are returned in good season to the milk of their mothers. This fact is well known to many physicians. Mr. Bernard conceived the idea of subjecting an infant, twenty-six months of age and exceedingly rachitic, to the use of the milk of a bitch. After having employed in vain a series of the measures used in like cases, this one resulted in a cure.

The animal was a fine, large hound of four years, which gave from eighty to one hundred and ten *centilitres* of milk daily. About the middle of the second month a notable improvement became manifest in the condition of the bones and muscular movements. At the commencement of the third month the child began to walk; at the hundredth day its health was good, the curvatures having nearly disappeared, and the child walked without aid. This result is easily explained by the comparative analysis of the human milk and the milk of the dog. Thus, according to the analyses of M. Jacquême, the human milk contains only in 1,000 parts, 26.66 of butter, 39.26 of casein and extractive matter, and 1.38 of salts; while that of the dog has 97.20 parts per thousand of butter, 117 of casein, and 13.50 of salts.

Apollinaris Water.—This water is the product of a spring in the valley of the Ahr, not far from the Rhine, and has qualities intermediate between those of the Seltersbrunnen, of Nassau, and the Krähnchen at Ems. It is, perhaps, the best natural mineral water for table purposes, and far excels the ordinary manufactured aërated waters, especially in this respect—that after withdrawing a portion of the contents of a bottle, it may be corked and set aside for even twenty-four hours, after which it will be found brisk as ever, instead of being flat and vapid, like ordinary Seltzer. Apollinaris water contains a considerable proportion of sodium salts, mainly carbonate, chloride, and sulphate, and will from these be found to act much in the same way as Ems water does in catarrhal affections of mucous membranes, for which that water is so renowned. But speaking merely from a lower standpoint, Apollinaris water is likely to take a high rank as a beverage.

Treatment of Cerebro-Spinal Meningitis.—Dr. Dowse, of the Central London Sick Asylum, after giving a good account of the etiology, symptoms, and post-mortem appearances of this disease, as it affects the base of the brain, observes that there is no disease requiring more constant watching or careful medical interference than this. He has seen an acute meningitis and myelitis treated with those drugs which produce congestion; for instance, opium and strychnine. Nothing can be more productive of harm than such treatment in the first or acute stage.

1. It has to be considered how to relieve the vessels of the cord, and to equalize the action of the vaso-motor system of nerves. Nothing appears to be of greater service in effecting this than the ergot of rye, and belladonna. The former he has prescribed in decided doses, such as half a drachm of the powder every four hours; and the latter he has applied to the spine in the form of a belladonna paste, made by mixing the extract with one-third its weight of glycerine.

2. To check the reflex vomiting, small pieces of ice must be swallowed, not sucked, as the full effect of its sedative influence upon the stomach is thus obtained.

3. To relieve constipation, Dr. Dowse prefers the administration of a pill of the watery extract of aloes, for the reason that it acts upon the mucous membrane of the rectum and dilates the hemorrhoidal veins.

4. To relieve sleeplessness, both chloral and bromide of potassium have proved ineffectual, but what he found of most service was a suppository of eight grains of the extract of henbane, with four grains of the extract of conium.

5. One essential practical point must not be forgotten—namely, to keep the paralyzed bladder constantly free from urine. It is not sufficient to draw off the water night and morning, which is the course usually adopted, but a self-retaining catheter must be kept continually in the viscus.

6. In reference to diet, it ought to be both nutritive and stimulant from the first.

7. There is a stage in the treatment of this disease where quinine in large doses becomes of the most signal value—at that crisis when exhaustion appears imminent; the skin covered with sweat; temperature 102° to 105°; pulse small, weak, and over 120. But more especially is quinine invaluable when rigors supervene, when it never fails to have a good effect. It must, however, be given in ten or twenty grain doses; and, if the stomach cannot tolerate it, must be introduced into the system by the rectum.

8. The abstraction of blood in any manner is not advisable.—*Med. Times and Gaz.*

Value of the Staining Process in the Histology of the Morbid Brain.—Herbert C. Major, M.B., calls attention to a fact which he considers of deep interest and of real scientific value, viz., the fact that morbid and healthy tissues are affected by the logwood staining-fluid in different degrees within a corresponding period of time, and urges that the utility of staining should not be limited to the definition of cells, and the tracing out of their connections, but that it should constitute, in some sense, a test for the cerebral substance, and thus play no insignificant part in the detection of pathological change. He refers to the apparent difference between sections from the brain of a case of acute mania and one of senile atrophy. In the former the gray cortical layer was deeply stained and accurately defined from the internal white substance, which was hardly colored. In the latter the reverse was the case, the cortical layer being darkest in coloring and well defined.—*The Lancet*, Mar. 7.

Œdema of the Left Upper Extremity in Heart-Disease.—M. Hanot draws attention to a fact which he has established in several instances of disease of the cardiac valves inducing general anasarca, and one which may be deserving of attention from clinical observers; viz., the earlier and more rapid development, and greater extent and persistency of œdema of the left upper extremity, than of the right in these cases. He suggests, in explanation, the difference existing between the brachio-cephalic veins of the two sides; the longer and more oblique course on that of the left side causing, even in the normal state, a greater impediment to the return to the heart of the blood from the left than from the right arm.—*Gaz. Méd. de Paris.*

Use of Glazier's Putty in Surgery.—Ordinary putty has been found by M. Conwall to be the softest and most applicable means of treating excrescences of tumors of various kind where compression is desirable, as it moulds itself so neatly to the surface. He thinks it to be superior to dextrine, silicate of soda, or plaster bandages.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, June 1, 1874.

RELATIONS OF AGE TO WORK.

In a pamphlet on the legal responsibilities of old age, by Dr. George M. Beard, of this city, there are many intercsting facts presented, particularly those bearing upon the relation of age to mental work. The statements in regard to this latter are based upon a very extensive study of the lives of the representative thinkers and workers of history, and are as interesting and suggestive to our profession as to any other class who live by their brains. The author maintains that most of the original work of the world has been accomplished before the age of forty-five, and notably between thirty and forty.

Although the paper does not present us with such an array of statistical facts as would tend to convince the sceptical, still there is doubtless enough of soundness in the conclusions to claim the general attention. The examples which are brought forward are numerous and striking, and of themselves form an interesting and suggestive feature of the brochure. Any one who has not directed his attention specially to the subject will at first be startled with many of the assertions of the writer, and in the event of accepting the conclusions as a law, he becomes painfully aware that there is very little time left for making a reputation. There are, however, a great many circumstances, if for the sake of the argument we accept the conclusions, which must militate against the absolutism of the law which our author attempts to establish,—circumstances which especially apply to scientific work. Generally speaking, brilliant discoveries in science cannot be made by very young men. The very preparation in the shape of study and research which makes these discoveries possible, requires of itself a long period, and in case a young man is successful, it is generally more a matter of chance than anything else. In general literature, art, or generalship, early success is not so impossible, for the reason that there is not a proportionate amount of study and preliminary preparation required. The very enthusiasm of youth, and the proverbial recklessness attending it, gives a peculiar and refreshing piquancy to the effusions of the young writer, a boldness of touch to the pencil of the young artist, or the requisite dash and daring to the exploits of the youthful commander. All these are elements which have a particular appreciation in the popular heart, and appeal in a peculiarly forcible manner to popular taste. A special genius for any of these pursuits may show itself early, and be entirely independent of any special culture, untrammelled by the dicta of any authority, or unschooled by the experience of those who have gone before. This assumption by no means proves that these talents may not be of a high order, only that their successful exercise does not necessitate a very long and thorough mental preparation for them. With the man of science, ambitious of making his mark, most of the so-called golden period of mental activity must be passed in severe training, while the same amount of brain-force is being spent by his brother in literature and art in founding a reputation.

While speaking of the sciences, we can take medicine as an example. Although we must admit that original work can be done, and is done, before the age of forty, we must also admit that a vast number of medical men do their best when they are past fifty. The very nature of the study of disease begets an enthusiasm for the work which extends in the well-educated man far into the hoary-headed period. Every medical man can call to mind striking examples of the truth of this assumption. We know of not a few who have made valuable discoveries when hard on to sixty, and, as far as we have been able of our personal knowledge to compare their number with younger men who have made equally valuable discoveries, we are not willing to admit that the latter are much in the majority. We believe that this is the common experience of every one who has any extended association with medical men. There is good reason for supposing that many of our older medical men would do more original work if the fitting opportunities for its performance were granted. We may make all due allowance for a decline of enthusiasm, but it strikes us a much greater impediment to special and original research is to be found in the overwhelming labor of a large practice, and the willing sacrifice of time which old-established practitioners make to it.

The writer of this pamphlet makes a statement that the golden period of mental activity is reached when the enthusiasm of youth is properly balanced by the experience of age. In medicine, as in all other sciences founded on recorded experience, is it not fair to assume that the time for original investigation must be late? Experience in medicine means a great deal, and unless this be considerable, enthusiasm cannot ac-

complish much, as the very foundation upon which it must work is wanting. How many a medical stripling has imagined he has made a discovery, and when he thinks he has perfected it, finds that the same idea had been brought out a century or two before. In the matter of personal experience, we can afford an example of what the enthusiasm of youth can accomplish in original research and what real scientific value can be attached to it without experience, or, what amounts to the same thing, without a knowledge of what was known before.

At the very commencement of our study of medicine, this enthusiasm led us towards what might be considered original brain-work. We resolved upon performing an operation upon a cat, and for this purpose administered chloroform to the animal. As the result of our unskilful management of the anæsthetic, the respiration of our patient became rather suddenly suspended, and the chagrin of the would-be operator was only equalled by the surprise of the spectators. Happening at the instant to place one hand upon the chest wall, and feeling the heart beat, we resolved to change the character of the operation and at the same time run the chance of seeing the heart beat for ourselves. The chest cavity was at once opened, and original thought brought its reward by the exhibition of the beating of the exposed heart. Desiring to prolong this exhibition, another thought occurred to us to keep the lungs in action. Our slight knowledge of anatomy was sufficient to enable us to find the trachea of the animal, sever its connections and expose it, and another original thought settled the question of inflation, which was carried on by the mouth through a dissecting blow-pipe. If the heart of an animal had never been exposed before and seen to beat, we might have made a discovery, but still the originality of the procedure was all the same. Many of our readers have doubtless had a similar experience in another direction before their enthusiasm was properly balanced by the weightier matters of written law. We have all doubtless missed the opportunity of being great discoverers because we have had the misfortune of being born after these discoveries have been made by some one else. If we assume that it is necessary to have a certain preparation for original work, and if before this preparation is complete a certain period of so-called fruitful brain activity must be passed, we must either assume that original discovery in medicine is next to an impossibility, or we must content ourselves in being mere copyists. If a young medical man has an original thought, and finds that by some unforeseen accident the same thought has not occurred to some one else, there may be a chance of turning his original thought to some personal account, and he may thus bridge over a good deal of hard study of the experience of others, and make a short-cut to a reputation; but this is mere good fortune, and an exception to the rule of scientific fame.

Although we believe that the golden age for medical discovery should be lengthened, we do not enter any special plea for old age. Beyond a certain time the brain is incapable of the requisite power for such work,—a time when all progress ceases, all capacity for original or any other kind of mental work is gone, when conservatism dwindles into old-fogyism, and when there is nothing left but the grinning skeleton of a dead reputation. When this period is reached, the old man should accept the issue, and gracefully yield the field to his more active junior.

THE AMERICAN MEDICAL ASSOCIATION.

The American Medical Association meets this year, June 2, in Detroit, and, judging from the efforts made by the Committee of Arrangements, we have much to expect in the way of a scientific success. We have spoken so fully on many points connected with improvements to be wrought in organization, that it is unnecessary to refer to them further at this time. There is certainly a promise of radical reform in many parts of its management, the realization of which will give us hope for even better things. The friends of the Association have, in such a light at least, no small interest in the success of the next meeting. All we have to wish for is, that the attendance will be good.

THE EDUCATION OF THE PEOPLE.

We have been pleased to notice the interest taken in matters of medical import which have been recently presented to the attention of the Social Congress by the members of our profession. The paper on School Hygiene, by Dr. A. L. Carroll, of New York, and the one on the Utility of Tent Hospitals, by J. Foster Jenkins, of Yonkers, are thoroughly representative of the advanced views of authorities on the subject, and deserve a special reference. It is also a subject for congratulation that the secular press has striven to do its part in giving the general public an opportunity of being informed upon these and kindred subjects. We have always contended that medical men were the proper teachers of the people on medical subjects, and this is one of the means to that end.

Reviews and Notices of Books.

The Puerperal Diseases. Clinical Lectures delivered at Bellevue Hospital. By Fordyce Barker, M.D., Clinical Professor of Midwifery and the Diseases of Women, Bellevue Hospital Med. Coll., etc. New York: D. Appleton & Co. 1874. 8vo, pp. 512.

This valuable and interesting work possesses the double merit of filling a vacancy in English medical literature, and of comprising the latest established doctrines and facts in the pathology and therapeutics of the diseases of which it treats. It is a safe and reliable guide for the young practitioner, and cannot fail to interest and instruct the more experienced. It is composed of twenty clinical lectures, illustrated by the

reports of well-selected cases. The author's remarks on the use of ergot for relieving retention of urine "when due to loss of contractility of the muscular tissue of the bladder," and for preventing post-partum hemorrhage and after-pains, we can fully endorse, having for many years successfully used it for that purpose.

The first four lectures cannot be too strongly commended to the attention, not only of the inexperienced, but all general practitioners, believing as we do, that if the suggestions in these lectures were generally recognized and enforced, much danger and suffering might be avoided, and the mortality of the puerperal state greatly diminished. The value of the following therapeutical agents, which are mentioned in the first two lectures, and repeatedly referred to in the course of the work, viz.: opium, turpentine, carbolic acid, quinia and iron, can hardly be over-estimated.

The timely and judicious use of these remedies is generally successful in warding off many of the puerperal diseases, or of bringing them to a safe termination. The lecture on lacerations of the perineum is devoted principally to the prevention of such accidents, by the proper management of that organ during labor.

In the lecture on albuminuria, the author shows conclusively that it does not necessarily imply renal lesions; that it may "exist in its fullest development without causing convulsions; that dangerous and fatal convulsions may occur when albuminuria is wholly absent; that the nervous perturbations which cause the convulsions, ... or even the convulsions themselves may be the cause of albuminuria," and that "albuminuria and uræmia are not identical terms, as either condition may exist and the other be absent." The treatment of albuminuria is considered in reference to the three periods in which it may occur, viz., pregnancy, parturition, and the puerperal state.

Two lectures are devoted to the consideration of puerperal convulsions; and the phenomena, causes, pathology and treatment of this disease receive all the attention that its importance demands. The "cure of anæmia," and "the relief of local congestions" are urged as prophylactic measures.

In the treatment of eclampsia, venesection, active purgatives, chloroform, and morphia are enumerated as the principal remedies. From our own experience it is gratifying to notice the importance the author attaches to bleeding. He says: "The bleeding is sedative to nervous irritation; it removes the tension from the brain, and protects it from the injury which might otherwise result from the convulsions; it relieves congestion of the kidneys and lungs, and takes off the pressure from the laboring heart; and it may be that it supplements the action of the kidneys, and removes from the blood a portion of its excess of urea." In the lecture on lactation, Dr. Barker maintains that, with proper management, "milk-fever is an exceptional incident to the puerperal state." In proof of this, he refers to the reports of fifty-two cases, from the records of Bellevue Hospital, in only four of which were there "any symptoms, either of increased frequency of the pulse, or a rise in the temperature indicating milk-fever."

That portion of the lecture devoted to the treatment of the various affections of the nipple is of especial value to the young practitioner, as it contains the only explicit and practical instructions for their management we have yet seen published. Prof. Barker theorizes ingeniously on the pathology of phlegmasia dolens, rejecting the commonly received doctrine of crural phlebitis as being the cause of phlegmasia, claiming that either may exist in the absence of the other, and pertinently remarks:

(1.) "That the assigned cause or condition should always be present when the disease exists.

(2.) "That the disease should always exist when the assigned cause is present in its full development;" and adds, "I think all theories of disease should be brought to the rigid test of such a standard." He objects, also, to the doctrines of Simpson and others, and concludes the discussion by declaring that "we are still as ignorant of its real pathological nature as we are of rheumatism and many other diseases."

Of the treatment of this disease the author justly remarks that "it will be judicious and successful just in proportion as it is free from all bias from theoretical speculations as to the pathological nature of the affection, and just in proportion as it is based on a sound and just appreciation of the special indications of the case."

A lecture is devoted to puerperal septicæmia and pyæmia, in which the distinctions between the two affections are clearly defined; and two lectures to puerperal fever, which the author believes to be "a fever peculiar to puerperal women, ... that its symptoms . . . are essential and are not in consequence of any local lesions, and it is as much a distinct disease as typhus fever, typhoid fever, or relapsing fever." He mentions two facts, which he thinks are sufficient to establish the distinction between puerperal fever and septicæmia, viz.: 1st. "It has often occurred that one physician is tracked by puerperal fever, following a series of labors, while in the same neighborhood, village, or city the disease is not met with in the practice of any other physician." 2. That he has been "unable to find that a single instance has yet been published where septicæmia has tracked the practice of one surgeon in any city or village, while the other surgeons in the same neighborhood did not meet with this affection." In the treatment of these diseases Prof. Barker claims that veratrum viride is contraindicated in septicæmia, while it is especially valuable as a sedative in puerperal fever. Quinia is justly extolled as an anti-pyretic and anti-pyogenic in these diseases. We regret that time and space forbid a more extended notice of a work so replete with sound pathological views and practical clinical instruction.

CLINICAL NOTES ON THE ELECTRIC CAUTERY IN UTERINE SURGERY. By J. BYRNE, M.D., M.R.C.S.E. Pp. 68. William Wood & Co. 1873.

DR. BYRNE, in sixty-eight pages, has given a valuable exposition of the application of the electric cautery to uterine surgery. The book is handsomely gotten up, and abounds in illustrations. A concise history of the introduction of this agent into surgery is given, and the ingenuity of the author is manifested in the original apparatus that he has devised, including the battery, which it strikes us is by far the best, in cost, simplicity, and action, that has yet been suggested. Under his own observation seventy-two cautery operations have been performed, and he records the clinical histories of the most interesting of these, besides giving the general results. These include cases of epithelioma, encephaloid, or medullary cancer; catarrhal, inflammatory, and ulcerative affections of cervical canal; amputation of cervix (non-malignant); fibrous and fibro-cellular polypi; sessile fibroid tumors; deep ulceration of os and cervix; intra-uterine vegetations (non-malignant), and vascular tumors of urethra. The results of the operations recorded are exceedingly satisfactory, and must aid in stimulating the more common use of the cautery. The conclusions which are deduced are honest and unprejudiced; and in the sparsity of our literature on this subject, this little book must find a place in many professional libraries.

GALVANO-THERAPEUTICS. A Revised Reprint of a Report made to the Illinois State Medical Society. 1873. Lindsay & Blakiston.

THE author of this report does not present a comprehensive exposition of the theory and applications of galvanism to the treatment of disease, but gives the results obtained by him in practice. An effort is made to formulate the indications for the use of galvanism, and several theories as to the mode of action of the current are advanced. The crudeness and want of elaboration that are manifest in this part of the book render the clinical contributions the only valuable portion. The book is written in a style awkward and constrained, so that at times it is difficult to appreciate the author's ideas. As a clinical contribution, however, it is welcome, for in no department of therapeutics are numerous clinical observations so much needed as in electrology. It is impossible as yet to formulate the laws and indications for the application of electricity, and the limits of its action have not yet been definitely defined; so that until a mass of clinical observations, made by competent and honest observers, shall have been reported, it will be impossible to form deductions that will allow of a systematic and intelligent use of this agent.

ARTICLES IN OUR EXCHANGES.

MATERIA MEDICA, THERAPEUTICS, AND TOXICOLOGY.

Cod-liver oil. KIRCHNER. *Berl. Klin. Woch.*, 1, 1874.

The hydrate of chloral and its employment in medicine. LIEBREICH. *Berl. Klin. Woch.*, 5, 1874.

Poisoning by vanilla ice. ROSENTHAL. *Ibid.*, 10, 1874.

On preparations of ergotine and tests for the same. WERNICH. *Ibid.*, 13, 1874.

On the action of the iodide of potash and corrosive sublimate. KAEMMERER. *Virchow's Archiv*, Feb., 1874.

Treatment by the nitrate of silver. KOEBEL. *Memorabilien*, 1, 1874.

Effects of quinine on the contractility of the uterus. E. BENAZZI and G. CHARLEONI. *Annal. Unniv. di Med.*, Feb., 1874.

Camphorated chloral. PAVESI. *Ann. di Chim. del Polli*, Feb., 1874.

The preparations of chloride of aluminum. CANDIANI and BIFFI. *Ibid.*

The physiological action of arsenic. PARIX CRASOLI. *Lo Spallanzani*, Jan., 1874.

Cerebral symptoms produced by the use of white lead as a cosmetic. JAMES H. HUTCHINSON. *Phila. Med. Times*, 116.

Use of alcohol medicinally and socially. GEORGE KEW. *Ibid.*, 122.

The anatomical, pathological, and surgical uses of chloral. W. W. KEEN. *Ibid.*, 125.

Physic and physics. CHAS. K. MILLS. *The Med. and Surg. Reporter*, 890.

Cinnamomum zeylanicum. JOS. BATES. *The Jour. of Mat. Med.*, March, 1874.

Treatment of intermittent fever by hypodermic injections of quinine. F. D. LENTE. *N. Y. Med. Jour.*, March, 1874.

Poisoning by morphia. G. M. SCHWEIG. *Ibid.*

Euthanasy. O. M. WOZENCROFT. *Pac. Med. and Surg. Jour.*, March, 1874.

Hypnotism. S. J. S. ROGERS. *Ibid.*

The convulsions of carbolic acid poisoning. J. R. HAYNES. *Phila. Med. Times*, 126.

Ascites cured by digitalis. W. S. MAXWELL. *Ibid.*

The power of infinitesimals in the system. WALTER COLES. *The Rich. and Louis. Med. Jour.*, March, 1874.

Cases treated by electricity. BEARD. *The Am. Practitioner*, April, 1874.

Electrotherapy. J. G. ROGERS. *Ibid.*

Therapeutic uses of arsenic. COLEMAN ROGERS. *Ibid.*

Phytolacca decandra in mastitis. J. CURTIS SMITH. *The Detroit Rev. of Med. & Phar.*, April, 1874.

Have we any cholagogues?—Alumni prize essay. GEORGE N. FULLER. *The Med. Exam.*, April 1, 1874.

Ergota. W. H. ROUSE. *The Penin. Jour. of Med.*, April, 1874.

Cures for the opium habit. A. B. PRESCOTT. *Ibid.*

Hay fever successfully treated. T. C. HOOVER. *The Am. Jour. of the Med. Sciences*, April, 1874.

Hydrate of chloral in treatment of pertussis. J. BORDLEY. *Ibid.*

Poisonous dose of croton oil. EDWIN ELLIS. *Ibid.*

NERVOUS DISEASES.

Temporary paralysis of adults, analogous to the temporary spinal paralysis of children, and which appears to arise from myelitis of the anterior horns. FREY. *Berl. Klin. Woch.*, 1, 2, 3, 1874.

Encephalopathia saturnina. (Certain forms of lead disease.) BERGER. *Ibid.*, 11, 12, 1874.

A new and simple method for determining the intellectual activity of the brain of insane persons. OBERSTEINER. *Virchow's Archiv*, Feb., 1874.

Pathological anatomy of the central organs of the nervous system. Atrophy of nerve fibres and ganglion cells. ARNDT. *Ibid.*

Mistaken cases of insanity. KOSTER. *Der Irrenfreund*, 11, 1873.

On moral insanity. *Ibid.*, 1, 1874.

Paralysis of the seventh pair successfully treated by electricity. BOLLABENE. *Il Raccoglitore Med.*, Feb., 1874.

Rheumatic paralysis of the larynx. DE RENZI. *Nuova Liguria Med.*, Jan., 1874.

The pathological histology of the great sympathetic. COLONIATTI. *Giorn. del R. Acc. d. Med.*, Jan. and Feb., 1874.

Case of locomotor ataxia. BURRESI. *Sperimentale*, March, 1874.

Case of bilateral paralysis of the abductors of the vocal cords cured by the electric currents. MAGGIOLI. *Il Raccoglitore Med.*, Feb., 1874.

Hydrophobia cured by hydrate of chloral. BASISIO. *Gaz. Med. Ital. Prov. Ven.*, Jan., 1874.

HYGIENE.

Climate of Florida. C. W. HORSEY. *The Am. Jour. of the Med. Sciences*, April, 1874.

Climatic influence of Colorado in the cure of asthma, etc. A. R. WHITEHEAD. *Ibid.*

Medical notes on trip through the Pampa del Sacramento, Peru. F. L. GALT. *Ibid.*

Influence of close confinement in prisons on the production of phthisis. A. L. LEACH. *Ibid.*

ERRATUM.—No. 201, p. 246, under SYPHILIS AND DERMATOLOGY, for *Before gestation*, etc., read, Herpes gestationis, L. DUNCAN BULKLEY.

Reports of Hospitals.

THE TREATMENT OF CONSUMPTION.

GLEANED FROM CLINICAL LECTURES AT THE HOSPITALS OF NEW YORK.

THE great controlling idea which should govern the medical adviser in the management of this class of cases is the adoption of such measures as will secure the best possible condition of nutrition.

As far as the lungs are concerned, they should be made of secondary consideration. Special symptoms

and local manifestations are not to be regarded as the great questions at issue. Not everything that is done is to be done with the view of checking a diarrhœa, improving the appetite, arresting night-sweats, quieting the cough, etc.

THE QUESTION OF CLIMATE IN PHTHISIS.

First, a proper atmosphere should be given the patient to live in. An air should be obtained, if possible, of such a nature that it can be breathed for the greater part of the twenty-four hours. Second, give the patient the benefit of sunlight. Third, avoid an atmosphere loaded with dust. Fourth, exercise without producing fatigue.

The climate should be selected, if change of climate is to be made, in which the patient can be the most comfortable for the greater part of the twenty-four hours, for that is the climate which is to prove the most beneficial. The temperature and locality are in general secondary considerations. As a rule, a low and damp location is injurious.

If the patient cannot be exposed to out-door air without feeling chilled, and is necessitated to sit by a fire when he returns, for the sake of again feeling comfortable, it is much better for him to remain in the house and make an atmosphere for himself by artificial means, and then take regularly such light gymnastic exercise as will keep the body in the best possible condition. If change of location is to be made, the patient should be sent to some place where he will have a good time. Never send a patient where he will be surrounded with depressing and unhappy influences. Never send a patient in the advanced stage of consumption away from home, unless he is so situated that he can take his home and all its comforts with him. Never send a person with consumption to the sea-shore, unless the experience of the individual has proved such an atmosphere beneficial. In general it does harm. Some favor long sea-voyages in the earliest stages. Especially avoid the habit of sending every patient to the same place. In case the patient enjoys hunting and fishing, if he can be sent to a locality where he can have his favorite sports, it will prove an additional item in his favor. The man who is fond of these sports is much more likely to get well of his phthisis. If these external general conditions can be controlled, no great amount of anxiety, as a rule, need be manifested with regard to the *cough*. It is the cough generally that most attracts the attention of the patient. The great object to be held in view is to raise the health of the patient to a level above that in which phthisis progresses. The power of drugs to accomplish this is very doubtful. Alcohol is of doubtful efficacy. If used at all, it should be used with the view of assisting digestion; and the article selected should be that most agreeable to the stomach. Air free from moisture and dust, food and exercise, are the things to be relied upon in the general treatment of this disease.

There are certain effects of the disease which the physician will be called upon to counteract, and for the relief of these he may be obliged to resort to some therapeutical measures. It is to these conditions and measures that attention is now especially directed.

THE COUGH OF PHTHISIS.

Phthisis occasionally occurs without cough, but these cases are almost always complicated ones. The insane may go through the entire course of phthisis without cough. For the relief of the cough of consumption an almost endless retinue of cough mixtures have been formulated. Most of them contain opium. The effect of the opium is simply to blunt the sensibility, and permit the material to accumulate which is to be expectorated. An additional result is, that opium is almost sure to injure the patient's digestion.

If it becomes necessary to do anything for the relief of cough, there is nothing more serviceable than morphine. While administering it, do as little as possible in the way of producing another evil, by the arrest of one already existing.

What are commonly known as cough mixtures are ignored. When remedies for relieving the cough must be used, use, by preference, those which have the most powerful quieting influence without disturbing the stomach.

DISTRESS AFTER EATING, AND DIARRHŒA.

This is a very common occurrence. There are two conditions upon which diarrhœa and distress after eating depend. They may depend upon a hyperæmic condition of the gastro-intestinal mucous membrane, consequent upon irritation produced by indigestible food, or diarrhœa may be caused by ulceration of the intestines. When diarrhœa or distress after eating occurs in the earlier stages of the disease, it is most probably due to hyperæsthetic condition of the mucous membrane, and a hyperæmic condition, of which the diarrhœa is but an effort to relieve the engorged mucous membrane. Simply arresting the discharges from the bowels is not well. Produce several watery discharges without pain, and the engorgement will be relieved; and then opium and astringents may be used with benefit if necessary. As a rule, opiates and astringents are to be resorted to only as secondary measures.

A very efficient prescription to be administered under these circumstances is:—

℞. Sulphate of magnesia,
Tr. opii camph..... ää ʒ i.
Aquæ..... Oi.
M.

S. Wineglassful every two or three hours, until two or three free watery stools are produced. To prevent recurrence, regulate the diet. When the bowels are irritable, beef-tea is apt to purge. Milk, farinaceous food, yolks of fresh eggs beaten up with wine and sugar. If these do not agree with the patient, raw beef scraped fine may be tried; or it may be just heated through, and then scraped fine and seasoned with pepper and salt; and in some hospitals vinegar is also allowed.

An exceedingly serviceable remedy to be regularly administered in these cases of disturbed digestion, irritable mucous membrane and diarrhœa, is *lacto-phosphate of lime*. The article must be fresh, and must be kept in a cool place. Unless these precautions are taken, the remedy itself will prove purgative.

Pepsin combined with *muriatic acid* is an excellent assistant to digestion under these circumstances; fatty meat, thoroughly boiled pork, fresh butter; perhaps cod-liver oil.

Thoroughly boiled pork is most excellent for children who suffer from summer complaint. The diarrhœa of phthisis may occur from simple thickening of the mucous membrane of the small intestines. When the diarrhœa depends upon ulcerations in the intestines, the regulation of the diet is an exceedingly troublesome undertaking. Resort should be had to those articles of diet which will give as little trouble as possible in the *latter* stages of the digestive process. If the ulceration is in the small intestines, cod-liver oil and the hypophosphites may be of great service. If the ulceration is in the large intestines, but little more than temporary relief can be expected. The presence

of blood in the discharges is regarded as evidence of ulcerations in the intestines. The seat of the pain, tenesmus, etc., is generally sufficient to distinguish ulceration of the large intestines from ulceration of the small intestines.

The most relief to be obtained from *drugs* is when the diarrhœa depends upon ulceration of the small intestines. The treatment adopted for the diarrhœa which depends upon a condition of hyperæmia is not of much service in this condition.

Among drugs sub-carbonate of bismuth is regarded as one of the best remedies that can be employed. It may be given in doses as high as ʒ i. t. i. d.

℞. Bismuth subnitrat..... ʒ i.
Morphiæ sulph..... gr. i.
M.
Div. in pulv. No. xij.
S. One every four, six, or eight hours, p. r. n.

Sometimes benefit will be derived from the use of mineral waters. Water from the Rock Ridge lime-spring of Virginia is the *best* that can be employed. The water contains lime and iron, and is astringent and tonic. Of this ʒ ij. to ʒ iv. may be taken every three to six hours. It can be taken clear or with other water.

Oak Orchard water is regarded as very serviceable in the treatment of chronic enteric difficulties of any kind.

In the latter stages of the diarrhœa of phthisis, especially when the large intestines are the seat of ulcerations, *opium* is the chief remedy to be relied upon. When given to relieve pain, hypodermically or by suppositories, it is much less liable to disturb the stomach. Suppositories made of *gum opium* alone are much more efficient than when the opium is compounded with other substances.

Salicine, in ten-grain doses t. i. d., has something of a reputation in the treatment of diarrhœa of phthisis. The remedy may be given in divided doses, and administered more frequently if desirable.

VOMITING AFTER MEALS.

This symptom is quite common, and when present is apt to be troublesome. A wineglass of champagne, taken during meals, will sometimes arrest it at once.

Hydrocyanic acid dil., in doses from ♏ iij., gradually increased to ♏ vij., administered just before each meal, is another remedy. The condition is ordinarily one of irritability, and if the acid can be carried so as to produce quite marked sedative effects, it may be of great service.

Pepsin.—Pepsin and muriatic acid, compressed soda pills (English preparation, grs. viij. each), one before each meal.

Raw beef scraped or cut fine and seasoned.—Let the patient take teaspoonful or half-teaspoonful doses every hour or two, or oftener, and subsist upon this alone for a few days. The effect is very beneficial in many cases. Another method of preparing it is to lay a piece of beef upon *live coals, immediately* turn it, and *immediately* remove it. This cooks the meat the least possible amount, and yet gives it a flavor which, to many patients, is much more agreeable than when perfectly raw. It is then cut in small pieces, seasoned, placed by the bedside of the patient, and every now and then a piece is taken, chewed, and swallowed. This is a most excellent means for overcoming the vomiting which is sometimes present in chronic Bright's disease.

HÆMOPTYSIS.

This, to the patient, is an alarming symptom. As a general rule, they do not die of hæmoptysis. In fact they do better, and are rather more likely to recover or have an arrest of the disease, when hemorrhage occurs. Those cases which do get well almost invariably have a hemorrhage before recovery takes place. The *moral* effect produced upon the patient when such encouraging expressions are given him is sometimes wonderful. It is in the early stages that hemorrhage may be beneficial; but from the middle to the latter part of the disease the result may be different. If the patient has bled a small quantity, place him in bed and keep him perfectly quiet. If he belongs to that class who can take opium without producing unpleasant secondary effects, a moderate dose will diminish the moral effect which the hemorrhage has produced, and will also diminish irritability. Salt may have some effect, and certainly it can do no harm. It may be taken in small spoonful doses, followed by water. It sometimes, without doubt, does good, for it ordinarily purges when administered in this manner, and it is a remedy of which the patient will not be afraid. In those cases where the patient occasionally spits up a teaspoonful or so of blood, do not resort to inhalations of nitrate of silver or persulphate of iron.

Ergot is employed as a hæmostatic. Hypodermic injections of ergotine, in doses of one grain to one grain and a half. Fluid extract may be used in doses varying from gtts. xx. to fl. ʒ i. p. r. n. If ergot given by the mouth does not produce vomiting, it is apparently of some service. ℞. Pulv. ergot exsicat., acid gallic, ää ʒ ss.; ext. gentian, q. s. M. Div. pil. No. x., one every four hours. *Quinia in very large doses.* Five-grain doses every hour until the pulse and temperature are brought down. One of the most powerful hæmostatics in the materia medica is turpentine. It is an exceedingly beneficial remedy in the treatment of *all* internal hemorrhages.

It may be administered in ten-drop doses every two hours if necessary. In the treatment of hæmoptysis this remedy is very conveniently administered by inhalation. It is volatile at a low temperature, and a copious vapor can be driven off in a very simple manner.

Take any convenient vessel, partly fill it with hot water; float upon the surface of the water, or suspend over it a shallow dish like a plate or saucer, upon which has been poured a small quantity (ʒ i.) of turpentine, and let the patient inhale the vapor as it arises. In this manner a gentle evaporation of the remedy can be produced which can be inhaled without inconvenience. When administered in this manner, it is especially applicable to those cases in which small hemorrhages occur, continuing for a number of days. The inhalation may be repeated three, four, or more times a day. Strangury is only rarely produced.

When the hemorrhage is profuse, the most certain remedy is to withdraw a given amount of blood from the general circulation. This can be done first by means of *dry cups.* Cover the chest anteriorly and posteriorly, and the thighs, if necessary, with the cups. If a still more powerful means is wished, resort to *ligation of the extremities.* Place a ligature around an arm, making it sufficiently tight to arrest the venous circulation, but permit the arterial circulation to go on. Do not retain the ligature longer than six or eight minutes upon any one limb, and when it is removed, loosen it gradually, thus gradually permitting the blood to again enter the circulation. Two or three minutes before removing the first ligature, a second one may be applied to the opposite arm, and in this manner all the extremities may be subjected to ligation. The amount of blood that can be retained from the

general circulation in this way is large. Hemorrhages may be instantly and repeatedly controlled by resorting to this measure. In quite a proportion of cases hemorrhage precedes the cough.

HECTIC FEVER AND NIGHT-SWEATS.

The fever is one of the principal symptoms which will engage the attention of the physician. Hectic and diarrhœa sometimes alternate. For the fever administer quinia in doses sufficient to diminish the temperature and control the pulse. An average dose is grs. xx. a day.

In occasional cases the remedy produces no marked effect. Another method is to produce ringing in the ears with quinine, and continue the remedy just short of producing that effect. The fever is very commonly controlled by these methods.

For the sweats, it should first be decided whether anything is to be done for their arrest. The sympathetic action between the skin and mucous membrane of the lungs is to be taken into consideration. A sudden arrest of the *sweats* may do more harm than good. They are, however, sometimes so severe that they must be checked if possible. The following are among the means which may be resorted to for that purpose:

Sponging with *hot water* before the patient goes to bed.

Sufficient flannel clothing to furnish a change whenever the patient awakes and finds himself in one of these sweats. Change the clothes at once, when sweating occurs, immediately preceding the change by sponging with *hot water*.

Arouse the patient a short time before the time for the occurrence of the sweat, and have him bathe his hands and face and take a light lunch.

A large dose of quinine before going to bed. In the experience of some, quinine hardly ever does any good in hectic or habitual sweats.

Aromatic sulphuric acid in gtts. xv. doses, and increased by gtts. v. until gtts. xl. or xlv. are taken at a dose. Its action is slow, but sometimes beneficial.

℞. Oxide of zinc,.....grs. v.
Ext. hyoscyamus,....grs. iij. M.
S. C. t. i. d.

Oxide of zinc pills, two grains each, t. i. d.

The zinc and its combination with hyoscyamus are regarded as excellent.

Fld. ext. ergot in drachm doses at bedtime is very beneficial in some cases. If retained by the stomach it is quite apt to be of service.

Ergotine hypodermically; atropine in such does as will produce some dilatation of the pupil. Doses one-sixtieth to one one-hundredth of a grain. Give a single dose at bedtime.

Hydrate of chloral given in a twenty-grain dose about two hours before the hour for sweating arrives has been attended with success.

THE USE OF COD-LIVER OIL.

Whenever the patient is losing flesh and strength use the oil. That preparation of the oil which is the most agreeable to take is to be preferred. Möller's cod-liver oil is regarded as a superior article. Give it in combination with an alkali. Lime-water answers a very good purpose as a vehicle

Oil with the phosphates answers well, and when the stomach is sensitive, hydrocyanic acid dilute with ℥ij. doses added, is very beneficial. Commence with drachm doses and gradually increase to half-ounce doses t. i. d., which is regarded as a sufficient quantity. Give it just before or just after meals, according to the election of the patient.

When the oil "rises upon the stomach," if the patient will educate himself to catch his breath, open his mouth, permit the bubble to burst as it reaches the fauces, and then blow his breath out, he will avoid all the disagreeable taste attending the eructations. This simple piece of strategy has enabled many patients to continue the use of the oil, where, before being instructed relative to it, they had been entirely unable to take it.

Nutrition can be very much supported by *inunction* with cod-liver oil. When oily food is not readily assimilable "pancreatic emulsion" is, in many cases, very serviceable.

THE USE OF OXYGEN.

This is of doubtful efficacy as a permanent remedy. It may give some relief. It is not to be lost sight of, and is worthy of trial.

SWELLED FEET.

This symptom is regarded by the laity as one of the latest in the disease. Very great relief can be given to the patient by supporting the weakened vessels with a *flannel* bandage, smoothly applied.

FISTULA IN ANO.

This is a complication not very infrequently met with in cases of consumption. In case the nutrition of the patient is good, and the fistula is not extensive, an operation may be performed, but the question should always be carefully considered. The liability is, that it will not heal.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, April 22, 1874.

DR. H. KNAPP, PRESIDENT, in the Chair.

COLOTOMY—EXAMINATION OF RECTUM BY HAND AND FOREARM—POINTS IN DIAGNOSIS—DEATH FROM SHOCK.

DR. SANDS presented a specimen which he had removed from a lady, aged forty-five, upon whom he had performed the operation of colotomy. He was requested to see the patient by Dr. Sheldon, of Riverdale, N. Y. She was said to have suffered from some impassable obstruction of the bowels for four weeks. He found her somewhat feeble, although not prostrated, and, from what could be learned, her constipation had come on gradually, unattended with vomiting, except on one or two occasions, the result of some of the cathartics which she had ineffectually taken. No indication of the nature of the obstruction could be ascertained by external examination. The abdomen was distended pretty evenly with gas in the intestines, but whether the large or small bowel was particularly involved could not be discovered. The track of the colon could not be traced, neither could it be settled that there was a marked accumulation of fæces. Pressure upon the abdominal walls was borne without special complaint, and this pressure excited the vermicular motions of the intestine, plainly visible through the thin parietes. The emaciation, although considerable, had been quite gradual.

An examination per rectum was made with the finger on the 12th of March, with the assistance of Dr. Sheldon, but the result was negative. Nothing but an mpty sac was discovered, and the finger, on being

withdrawn, was covered with a slimy mucus, but without the stain or odor of fæces. The day following, at the second consultation, it was deemed advisable to anæsthetize the patient and examine the rectum by the hand. The patient took ether without any trouble. She lay upon her left side, in order to enable Dr. Sands to use his left and smaller hand. This examination was also unattended with any positive result. The hand was passed without any great resistance into the rectum, and with care was gradually and carefully pressed forward until the sigmoid flexure was reached, the distance being about twelve inches from the anal orifice. When the hand had passed as far as this, the forearm was found to be too large to go further. No stricture was detected by this examination, although the coils of the intestine were felt distended with fæcal matter. An attempt was made to feel the caput coli, but with an obvious disadvantage, as the left hand being used, the backs of the fingers and the fingernails were only available. The impression was derived, however, that the small intestine was the seat of the disease, an impression which was not confirmed, in consequence of the necessarily incomplete examination. The attending physician shared in this opinion at that time. The alternative of gastrotomy was thought of, but hardly recommended.

The case was allowed to go on a week or so longer. The urine was watched, and, as it was considerable in quantity, the hope was entertained that the seat of the difficulty might after all be in the large intestine. It was proposed to give ether once more and make another examination, this time to use the right hand for the purpose, with the understanding that, if the large intestine was involved, to resort to colotomy, and if the stricture was found in the small intestine, to perform gastrotomy.

On the 24th of March, in the presence of Dr. Sheldon, Dr. Miner, of Brooklyn, Dr. Foster Jenkins, of Yonkers, and Dr. John Curtis, of this city, Dr. Sands made the examination referred to, and discovered the case to be one of stricture of the colon, the caput coli being enormously distended with fæcal matter. No time was then to be lost in performing lumbar colotomy. Even in the second examination the point of stricture was not discovered, a fact of considerable clinical interest, inasmuch as this point was only fifteen inches from the anus.

The operation was performed on the right side, according to Amussat's method, and without accident. On opening the ascending colon the fæces escaped pretty copiously. The patient was very feeble at the time, and he was not surprised to learn that she died the next day from the shock of the operation, just about twenty-four hours after its performance.

The autopsy was made by Dr. Curtis the day following. On opening the abdominal cavity, there were no evidences of peritoneal inflammation. The opening made in the colon by the operation was found to be of the usual size and unattended with any injury to the peritoneum. This portion of the gut was removed for a specimen, as well as a portion of the liver adherent. Another specimen removed was the caput coli, which, by a separation of the longitudinal muscular fibres at certain points, and a rupture of the peritoneal coat in two or three places, exhibited in a curious manner the results of extreme distention.

The seat of stricture, which was in the sigmoid flexure, and fifteen inches from the anal orifice, was also exhibited. This stricture, which occupied fully one-half the circumference of the intestine, was formed by a deposit of morbid tissue, the precise nature of which Dr. S. was unable to determine until a thorough examination of it could be made. It was suspected, however, to be sarcomatous material, judging from the appearance of a similar and secondary deposit found in the liver. By the almost complete limitation of the deposit to the posterior portion of the intestine, the anterior portion of the canal was doubled upon itself, so that the peritoneal folds were in contact, in which position there were slight adhesions. It was in this latter situation that a rupture was made by Dr. Curtis while attempting to distend the stricture during the autopsy.

There were several interesting points in connection with this case that related principally to the method of examination pursued:—

I. Without this method of rectal exploration, Dr. Sands did not think that any one could have decided whether the stricture was in the large or the small intestine. Although it is well known that, as a rule, chronic obstructions were nearly always to be found in the large intestine, and acute obstructions were met with in the small intestines, still the rule had its exceptions. By the last examination he was enabled to decide the point of distention of the descending colon, and to tap it and get rid of the fæcal accumulation.

II. Such examinations, judging from the softness of the material composing the stricture, were necessarily attended with considerable risk. In fact, in this particular instance, taking into extra consideration the fact of an ulcerative process going on in the vicinity, which it was thought would soon have gone through the peritoneum, he was rather surprised that the examination, carefully made as it was, had not produced a rupture and occasioned a fit of peritonitis. As it was, some of the longitudinal fibres of the rectum were separated at a place about eight inches from the anus.

III. The examination enabled the operator to map out through the abdominal parietes, by pressure from within, the exact situation of the colon. The operation, although simple enough in principle, was not always easy of performance, and the rules laid down were not reliable in every case. By the method of rectal examination the situation of the incision was found to correspond to a small congenital nævus, which in this case was a convenient mark.

IV. The results of this examination also prove that it is hardly possible, without incurring great danger, to pass higher up than twelve inches. In this case the stricture was but fifteen inches from the anus, and yet it was impossible to touch it during the explorative procedure.

Dr. Janeway remarked that in those cases in which strictures followed chronic dysentery, there was particular liability to rupture by such examinations, as a large number of ulcers were apt to be in the immediate vicinity. In that connection he referred to a case in point, in which even an ordinary explorative examination, if it had been made during life, would have been attended by rupture.

A NEW METHOD OF MAKING A POST-MORTEM OF THE ABDOMINAL CAVITY.

While speaking of rectal explorations, he referred to a new method of making post-mortem examinations of the abdominal organs without external incision; this was by the introduction of the hand per rectum, and extracting any of the organs within reach. By such a method Dr. Chapin, of Bellevue, recently removed a piece of the liver, and kidneys, not only to the satisfaction of himself, but with a conscientious regard for the order of the friends that the body should not be opened.

STRICTURE OF INTESTINE, AND CONDITIONS INTERFERING WITH COLOTOMY.

DR. E. MASON exhibited a specimen, which being one of colotomy, very appropriately followed the one of Dr. Sands. This specimen was of interest, more particularly as showing an obstacle to the successful performance of operation. The portion of the rectum and colon exhibited was removed from a man, aged thirty, who had been a car-driver for thirteen years, and whose habits were, according to his own account, very dissipated. Four and a half years ago he had his first attack of diarrhœa, which came on suddenly in the night and without known cause. This condition continued up to the time of the patient's death, with the exception of an interval of a few days at a time, when he would suffer from constipation.

The patient had been under Dr. Mason's observation for the past two years, during which time he had been an inmate of several of the hospitals. During the period a stricture of the rectum developed, which was treated from time to time by dilatation with bougies. Towards the last he became quite weak, emaciated, and suffered considerably from cough. For the last two months the patient was in the medical wards of Charity Hospital. His sufferings eventually became so great that he was exceedingly anxious for an operation, and its performance was finally agreed to with reluctance.

At the time of the operation the abdomen was much distended, and in the right iliac region there was marked dulness, which was referred to impacted fæces. The incision was made upon the left side. When the fascia was opened and the colon reached, to Dr. Mason's surprise the intestine was immovable, and its walls very much thickened, and showed indentation on pressure. In view of these facts it was determined to abandon the operation. The wound healed kindly in a short space of time, but the patient sank and died from his lung trouble (phthisis) April 11, twenty-eight days after the operation.

Post-mortem.—In opening the abdomen the ascending and transverse colon were much distended, while the portion of intestine exposed was found enormously thickened and perfectly immovable by old adhesions, requiring for its isolation the use of the scalpel and scissors. The stricture was about three and a half inches in extent, and five lines in thickness. The lungs were extensively diseased, and the liver cirrhotic.

[DR. MASON, in connection with a former case of colotomy, presented at the January 28th meeting, remarked that the age of the patient had been published as seventy-six instead of twenty-six—a typographical error.]

COLLOID CANCER OF GALL-BLADDER, KIDNEY, ETC.

DR. JANEWAY exhibited the liver of a woman, aged forty, who was admitted into Bellevue Hospital, March 11, 1874, in the service of Dr. Polk. Dr. Janeway saw the patient but once during life. The hospital record of the case was made by Dr. Young, from which the following facts were obtained: About six months ago she noticed a small tumor, the size of a hen's egg, three and a half inches to the right of the umbilicus, and two inches below it. In the course of two months the growth was as large as an orange, and gradually increasing it reached its maximum size, that of a cocoa-nut, two months before admission into the hospital. There was no hereditary taint present. She ceased menstruating some time before admission. On examination after entrance, the tumor was found situated in the right lumbar region, extending thence into the umbilical. It was quite movable, not painful, and was said to be dull on percussion. The patient stated that for a month previous to admission the tumor had apparently decreased rather than increased. Dr. Janeway, as before stated, saw the patient but once, and then, instead of the dulness over the tumor, there was a tympanitic note. He succeeded in feeling the edge of the liver, but he could not be positive whether the tumor was developed in the tissue of that organ or outside of it. The resonance was accounted for on the supposition that the colon was at the time just underneath the tumor. It was easily ascertained that the tumor was not connected with the kidney of that side; the question of diagnosis was whether the mass was connected with the liver, gall-bladder, colon, or omentum. The patient sank and died of asthenia.

Dr. Janeway was of the impression that the case was one of carcinoma originating in the peritoneum of the transverse colon, or in the colon itself, involving the liver secondarily. He had observed two carcinomas in this situation with these relationships, and which, on post-mortem examination, left one in doubt about real site of origin, because they were so equally situated between the peritoneum in the site mentioned and the liver-tissue.

At the autopsy, April 13th, the brain was not examined; the heart was normal. Both lungs contained numerous small nodules of colloid cancer. These varied in size, but the largest was not more than half an inch across. The majority were situated superficially. In the outer half of lower lobe of the left lung, bordering on the interlobar fissure and protected on its margins by recent exudative pleurisy, there was a cavity in the lung-tissue partly occupied by a slough. The size of this spot was about two inches in diameter. Its outer wall was formed by costal pleura, the pulmonary pleura having been destroyed.

On opening the abdomen, a large, whitish tumor was observed projecting from beneath the right lobe of the liver, and situated in the right lumbar and the right side of umbilical region. This tumor was about the size of a cocoa-nut, and was bounded on the inner side by the descending duodenum, and had the transverse colon passing beneath it.

On turning the liver over after its removal with the surrounding parts, the tumor was found to extend from the longitudinal fissure to near the right margin of the liver, and it is impossible to study its exact connection with the liver. On section through the tumor in a vertical direction, its centre was found occupied by a hollow space containing broken-down masses of the colloid cancer forming its walls and very black fæcal matter. Three round fistulous openings lead from this sac into the inner right border of the descending portion of the duodenum, the largest about the size of a number 14 sound, and one larger round opening forms a communication with the transverse colon. Except by these facts the intestine is unaffected. The tumor seems to occupy the site of the gall-bladder, and this organ, save as a part of diseased mass, cannot be found. Its right wall is formed by the liver-tissue, which is in a state of carcinoma, but gives the impression that it has become secondarily involved, so that it appears as if a good deal of the upper and under walls and the whole of left border were formed by the diseased gall-bladder with uncut, thickened, carcinomatous walls. In the liver-tissue above the sac was a round mass of colloid cancer, about two and a half inches in diameter, in whose firmer fibrous trabeculæ white calcareous spicula were observed.

There were also a number of small places where the liver-tissue was the seat of the disease near the lower part of the right border. All the disease in the liver gave the impression of a spread by contiguity of struc-

ture. A number of the lymphatic glands seated in the transverse fissure were much enlarged, and were marked examples of colloid cancer; they showed to the naked eye a delicate white stroma, whose interspaces, comparatively speaking, were large and filled with the translucent gelatinous colloid matter. In the liver the areolæ apparent to the naked eye are larger. The hepatic duct and the ductus communis choled. are pervious. The portal vein appeared to be only slightly compressed. The kidneys, spleen, intestines, uterus, etc., are normal.

The microscopic examination of colloid matter from lymphatic gland showed the greater part to be a homogeneous, gelatinous, delicately striated-like mucus. In this were found cells, the majority of which showed a cylindrical type; some were more rounded and gave evidence of colloid change in interior. Besides, there were a number of small rounded or oblong bodies, apparently free nuclei and remains of cells set free by the disintegration of the cells. Also, in some places, remains of alveolar structure were apparent. The walls were fibrous and the spaces varied in size. The lungs and liver showed the same structure, except that the fibrous partitions in each case were more marked than in the glands, giving to the section a honeycombed appearance. Even in the smaller points of cancer but few cells were found in the alveoli.

It will be seen from the above account how impossible a knowledge of the exact place of origin of the tumor was during life; for at the time she came under observation the liver was considerably involved in the disease, and even after death a section of the tumor and some dissection were necessary to disclose its exact relationship. Colloid cancer of the gall-bladder is rare, and one with fistulous communications with duodenum still more rare; but one with fistulous communications with both duodenum and transverse colon I have not seen described. In conclusion, he remarked that metastases of colloid cancer, such as were observed in the lung in this case, were not of frequent occurrence.

He also presented two other specimens without a history, and removed from dissecting-room subjects. One showed an enormously distended vermiform process, with the orifice occluded, explaining the condition. The other specimen showed an adhesion of the Fallopian tubes to the uterus, with fistulous openings between these and the cavity of the sigmoid flexure.

In answer to a question from Dr. Briddon, he stated that he had seen two cases of great distention of the vermiform process, one as large as the size of a child's head, and in these, as well as in the case just presented, there was an occlusion of the opening to account for it.

CYSTIC SARCOMA.

Dr. Briddon presented a cysto-sarcomatous tumor, the size of a billiard-ball, removed by operation from the anterior and middle portions of the thigh of a gentleman aged sixty-five.

ATHEROMA OF CEREBRAL ARTERIES—APOPLEXY AND CONVULSIONS.

Dr. Leale exhibited the brain, heart, and kidneys of a gentleman whom he saw for the first time on the Saturday previous, and who died shortly after in convulsions. The patient first suffered from obscure cerebral symptoms in 1864, following an attack of sunstroke. He went on reasonably well, however, until September last, when he suffered from an attack of facial paralysis of the left side. This was in time entirely relieved, and nothing unusual occurred until the attack of convulsions referred to. When Dr. Leale saw him during one of the paroxysms, he discovered partial paralysis of the right side, with dilatation of the left pupil. The attacks came on at intervals of every fifteen or twenty minutes until death. The urine was examined during the visit, and was found to be heavily loaded with albumen.

At the autopsy the membranes of the brain were found adherent at the superior portion of the middle lobes of the cerebrum. There was on the left side a very large clot, completely filling the fissure of Sylvius. The arteries of the circle of Willis presented a moderately healthy appearance, but the arteries beyond were in an atheromatous condition. The anterior and posterior branches of the middle cerebral were found completely occluded by atheromatous deposit. The middle branch of the middle cerebral was also found occluded for a quarter of an inch, and between this plug and the middle cerebral artery, at its termination, was a fissure an eighth of an inch in length, through which a hemorrhage occurred. The heart weighed one pound one ounce and one drachm (*Avoird.*), and measured five inches in length by seven in breadth. It was covered with a large mass of fat. The liver was large and waxy. The gall-bladder contained a glistening calculus about the size of a pigeon's egg. The right kidney weighed five ounces, the left seven and three-quarter ounces; on the surface of the latter were several grayish patches, composed of broken-down tissue and oily matter. The patient had arcus senilis, well marked. There was a large deposit of atheroma in the aorta and coronary arteries. The urine, which was examined before death, was of a slightly acid reaction, had a sp. gr. of 1.005 and contained a large quantity of albumen and casts. The brain weighed fifty-four ounces.

FATTY PLACENTA.

Dr. Leale presented a second specimen, which was the placenta discharged from a lady confined at her full term. Throughout the substance of the organ were three deposits of fatty substance, about the size of a hen's egg. The patient had no constitutional symptoms of syphilis, but her husband was at the time suffering from secondary sore-throat trouble. The child was puny. The cord was very pale and the pulsation feeble.

The Society went into Executive Session.

Correspondence.

CONCERNING THE AMERICAN MEDICAL ASSOCIATION.

To the Editor of The Medical Record.

Sir:—In your editorial on the reorganization of the American Medical Association (Record, April 15, 1874, p. 205), you refer to the proposed change in the manner of electing delegates to the Association, saying that "their choice should be restricted to the county societies principally, and the colleges and other similar institutions should be left out of consideration entirely. By the exercise of due care in this regard, it will by and by be considered an honor to be chosen, and our best men may deem it worth their while to enter the lists on that account."

In the Record of May 1, 1873, p. 214, you printed some suggestions from me on the above subject. Permit me briefly to reproduce the main point—how to

reduce the number of delegates, and thus increase the usefulness and the respectability of the Association:

"The medical society of each State may send as many delegates as the State has representatives in Congress, but any State that may have only one representative shall be entitled to send two delegates." This "will give a total of delegates from States of 296." Certain other organizations—the Medical Society of the District of Columbia, the Medical Departments of the Army and Navy, &c.—should be allowed delegates. Delegates should hold office four years, one-half being elected every two years. "No State society, after the year 1880, shall be entitled to representation unless it is composed of delegates *from county societies.*" . . .

In your editorial in the same number (p. 205) you did me the honor to "commend them" (my suggestions) "to the attention of all interested in the question of creditable delegateship. Although his" (my) "method is far from perfect, it presents many striking points of practicability. We can at least seize upon it as a starting-point. We care not how the question of delegateship is settled, provided that we attain the results so anxiously, so imperatively desired."

If the plan of restricting the choice of delegates to county societies be adopted, it will be a great advance on the present method, but the evils inherent in a large, badly selected, and unmanageable body will not be corrected. The State of New York has more than 2,750 county society members, from whom there would be selected more than 275 delegates. High as the profession stands in this State, I do not think that there are so many REPRESENTATIVE *men* in it.

My plan proposes that there shall be chosen by the State Medical Society, *from the State* AT LARGE, or, if it is preferred, by Congressional districts, about thirty-three of our very best men, to go to the American Medical Association to legislate for us, and by their scientific contributions elevate and strengthen the position of our common profession—at any rate, so to conduct themselves as an association as no longer "to make the judicious grieve."

J. S. PROUT, M.D.

BROOKLYN, May 13, 1874.

SKENE'S DILATOR.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—In the issue of the RECORD of May 1st, is a letter from Dr. Lente, calling the attention of the profession to the comparative advantages of Molesworth's dilator. As the recommendation of Dr. L. is so deservedly potent in the profession, I deem it all the more proper that notice should be called to another instrument, *not a patent*, which was devised for the same purpose, and which, while costing very much less to the "*country* practitioner," is equally efficient, and is easier to manipulate. In the *Am. Journal of Obstetrics* for May, 1873, Dr. A. J. C. Skene, who devised the instrument to which I refer, describes it and explains its use. Every practitioner has at hand a hard-rubber syringe, and obstetricians the Barnes' dilators. "All that is required in addition to these is a hard-rubber tube about ten inches long, terminating in a bulb or knob at one end, having a stop-cock at the other, and a curve to correspond with the axis of the pelvic excavation. . . . . It is about the size of a No. 9 catheter, and is slightly flexible. This tube is carried into the rubber bag, and answers three important purposes:

"1st. It guides the introduction of the bag.

"2d. Holds it in place within the os uteri; and,

"3d. Makes a convenient connection with the syringe used to fill the bag with water. . . . . By this arrangement much smaller sized dilators can be used than those of Barnes:" indeed, as small as the tube used to guide it. We have, then, an instrument cheaper, and equally efficient and applicable. As the instrument of Dr. Skene is given to the profession without the restrictions of a patent, being equally serviceable, are not its "comparative advantages" greater, and is it not to be preferred in use? * * *

SHORTENING OF LIMBS AFTER FRACTURE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—My friend and colleague, Dr. Sayre, in a clinical lecture on "Ununited Fractures," is reported in THE MEDICAL RECORD of May 1, 1874, as having said, "The law, however, that shortening must necessarily attend the union of a fractured bone, is incorrect, as can be satisfactorily proved by practical demonstration." . . . "Now you will see the impotence of the law laid down, that shortening must always take place if union is effected."

I am not aware that any one has ever laid down a law of this kind. If any one has, he has rendered himself a proper subject of ridicule. Believing, however, that Dr. Sayre has been reported incorrectly, or that, in an oral lecture, he has spoken inadvertently, I wish to call his attention to the paragraphs above quoted, and to ask him how they are to be understood.

FRANK H. HAMILTON.

NEW YORK, 43 W. THIRTY-SECOND STREET.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from May 5, 1874, to May 18, 1874.

ABADIE, E. H., Surgeon.—Leave of absence extended sixty days on surgeon's certificate of disability. S. O. 101, A. G. O., May 8, 1874.

BAILEY, E. J., Surgeon.—Relieved from duty in Department of California, and to report to the Commanding Officer, Department of the Columbia, for duty as Medical Director of that Department. S. O. 96, May 2, 1874.

COOPER, GEO. E., Surgeon.—Relieved from duty in Department of the Columbia, and to report to the Commanding General, Department of California, for assignment to duty. S. O. 96, c. s., A. G. O.

WRIGHT, J. P., Surgeon.—Relieved from duty in Department of Dakota, to proceed to Carlisle, Pa., and, on arrival, report by letter to the Surgeon-General. S. O. 96, c. s., A. G. O.

TOWN, F. L., Surgeon.—Relieved from duty in Military Division of the Atlantic, and to report in person to the Commanding General, Department of Texas, for assignment. S. O. 96, c. s., A. G. O. To proceed to Fort Sill, Indian Ty., and on arrival, report by letter to the Commanding General, Department of Texas, for assignment, so much of S. O. 96, c. s., A. G. O., as directs him to report in person, having been revoked. S. O. 105, A. G. O., May 13, 1874.

TILTON, H. R., Assistant Surgeon.—Relieved from duty in Military Division of the Atlantic, and to report in person to the Commanding General, Department of Texas, for assignment. S. O. 96, c. s., A. G. O.

WEEDS, J. F., Surgeon.—Assigned to duty at Fort Abraham Lincoln, D. T. S. O. 83, Department of Dakota, April 29, 1874.

MCCLELLAN, ELY, Assistant Surgeon.—To take station at Louisville, Ky., and from that place visit the towns and localities at which cholera prevailed during the year 1873, as designated in instructions given him by the Surgeon-General. S. O. 103., A. G. O., May 11, 1874.

BROWN, J. M., Assistant Surgeon.—Relieved from duty in Department of Texas, to proceed to Philadelphia, Pa., and, on arrival, report by letter to the Surgeon-General. S. O. 86, c. s., A. G. O.

DE HANNE, J. V., Assistant Surgeon.—Relieved from duty in Department of the Missouri, to proceed to New York City, and, on arrival, report by letter to the Surgeon-General. S. O. 96, c. s., A. G. O.

PATZKI, J. H., Assistant Surgeon.—Assigned to duty at Fort Fred. Steele, Wy. Ty. S. O. 65, Department of the Platte, May 9, 1874.

WOODRUFF, E., Assistant Surgeon.—Relieved from duty in Department of Dakota, to proceed to Louisville, Ky., and, on arrival, report by letter to the Surgeon-General. S. O. 96, c. s., A. G. O.

DICKSON, J. M., Assistant Surgeon.—Relieved from duty in Department of the Platte, to proceed to Cincinnati, Ohio, and, on arrival, report by letter to the Surgeon-General. S. O. 96, c. s., A. G. O.

HOLDEN, LEVI H., Surgeon (retired).—Died at Vineland, N. J., on May 12, 1874.

Medical Items and News.

DEATH OF DR. HOLSTON.—At a called meeting of the Zanesville Academy of Medicine, held Saturday, May 2, to take action in relation to the death of its late Fellow, Dr. Jno. G. F. Holston, Sr., which took place at Washington, D. C., May 1, 1874, the following resolutions were adopted:

That we, whose occupation has been to relieve human suffering, are reminded that the time must come when our places on earth shall be vacated. Therefore,

Resolved, That in the death of Dr. Holston, the Zanesville Academy of Medicine loses one of its prominent members, and the profession at large an eminent physician and surgeon of extensive professional and literary culture, ripe experience, and accurate judgment; and society a warm-hearted, genial, and generous member, whose life has been mainly devoted to the good of his fellow-beings.

Resolved, That we attend the obsequies of our deceased Fellow in a body.

Resolved, That we deeply sympathize with the family and relatives of the deceased.

Resolved, That the Corresponding Secretary transmit a copy of these resolutions to the family, the city Press, and the Medical Journals.

C. C. HILDRETH, Chairman.

A. E. BELL, Secretary, pro tem.

DEATH OF JOHN H. GRISCOM, M.D.—The following resolution, presented by Dr. J. G. Adams, was adopted at the last meeting of the Academy:

Whereas, John H. Griscom, M.D., an original Fellow of this Academy, departed this life on the 28th ult., in the 65th year of his age. Therefore,

Resolved, That this Academy do put on record upon its minutes their appreciative sense of the long public services rendered by the deceased, his untiring industry in the pursuit of knowledge, his efforts in the cause of science and humanity, more especially as regards improvements in ventilation and other sanitary measures. In his spirit and intercourse, kind and genial; in his views and influence, highly conservative; in his official trusts, diligent and self-sacrificing, he was an honored member of an honorable profession.

Resolved, That our secretary transmit a copy of this minute to the afflicted family of the deceased, with the assurance of the heartfelt sympathy of the Academy. (Signed,) JOHN G. ADAMS, M.D.,
ALFRED C. POST, M.D.,
GURDON BUCK, M.D.

THE UNIVERSITY OF OTAGO, NEW ZEALAND, has advertised for candidates to occupy a chair of anatomy and physiology which it has recently instituted. The salary will be £600 per annum, which will commence from the date of embarkation, besides the class fees, which have been fixed at £3 3s. for each student, per term of six months. An adequate allowance will be made for passage-money and outfit. The age of candidates should not exceed thirty, and they must be possessed of qualifications such that home universities would approve of them as competent medical teachers. They must be university men and have a medical degree; a degree in arts besides will be deemed a recommendation. Private practice will not be permitted. —*Med. Press and Cir.*

A MICROSCOPIST was jocosely asked by one of his colleagues if he could tell him anything he did not know about the white blood-cells. He answered at once, "From the terms of your question I think I can mention two things—in the first place they are *not* cells; in the second place they are *not* white."

CONVENTION OF "CONFEDERATE" SURGEONS.—The Confederate Surgeons' Convention, held at Atlanta, Ga., on May 21st, elected Surgeon-Gen. P. Moore, Permanent President, and Dr. Henry F. Campbell, Vice-President at large. The Association was named the Association of the Medical Officers of the late Confederate States Army and Navy. Medical officers of the United States Army and Navy, who resigned to join the Confederates, are made honorary vice-presidents. A committee of three was appointed to confer with the Surgeon-General of the United States Army relative to the archives of the Medical Department of the Confederacy. Richmond was selected as the next place for meeting, in July, 1875.

PROFESSOR BUNSEN'S LOSS.—The valuable manuscripts of Professor Bunsen, of Heidelberg University, the fruits of three years' labor, were accidently burned a few weeks ago. The Professor was called out by a visitor, who wished to see the laboratory, and when he returned to his room the work of destruction was complete. The rough drafts and the manuscript prepared for the press were all consumed. The cause of the fire is entirely unknown, unless the sun, acting upon the peculiarly constructed window-glass, wrought the mischief.

COLLEGIATE APPOINTMENTS AND RESIGNATIONS.—Professor Edmund R. Peaslee has been elected to deliver the course of lectures on Diseases of Women, at the next session of the Bellevue Hospital Medical College.

Dr. Stephen Smith has been appointed Professor of Surgery in the Medical Department of the University of the City of New York.

Prof. D. Warren Brickell has resigned his position in the Bellevue Hospital Medical College, and has returned to New Orleans.

American Medical Association.

TWENTY-SEVENTH ANNUAL MEETING AT DETROIT, JUNE 2, 3, 4, AND 5, 1874.

DR. J. M. TONER, OF WASHINGTON, D. C., PRESIDENT.

THE Association held its first day's session in the Detroit Theatre, and was, pursuant to previous adjournment, called to order by the President, Dr. J. M. Toner, of Washington, D. C., at eleven o'clock. The Vice-Presidents, Drs. W. Y. Gadberry, of Miss.; N. C. Husted, of N. Y.; J. M. Keller, of Ky.; and L. F. Warner, of Mass., were present upon the platform.

A prayer was offered by Right Rev. SAML. A. MCCOSKRY, Bishop of Michigan.

DR. WM. BRODIE, chairman of the Committee of Arrangements, welcomed the Association to Detroit in an appropriate address, in the course of which he gave an interesting and detailed account of the growth and prosperity of the city. Among other noteworthy remarks in this connection were the following:

We boast of Detroit as one of the healthiest cities of the Union, its mortality being only two and one-half per cent. for the year 1873. This happy state of health is not only due to her location on the beautiful Detroit River, but to her complete system of sewerage, over ninety-two miles having been constructed since 1885, at a cost of $1,523,000. Her public-schools system—the establishment of which on their permanent basis, and of which our citizens are justly proud—was eminently due to the efforts of the late Dr. Pitcher, who was your presiding officer at its meeting in this city in 1856. This system embraces twenty-eight school buildings, at a valuation of $548,000, in which over 12,000 scholars were enrolled for 1873, and education at an actual cost, inclusive of all expenses, of $10.50 per pupil per annum. Her public library deserves mention as one of her most popular institutions, established by the Constitution of the State, managed by the Board of Education, and supported by court fines and penalties. Its total receipts are $74,000; its expenditures, $52,000; and its total number of volumes, 22,935. Detroit is abundantly supplied with water from the Detroit River. Of its purity Prof. Duffield says: "It is impossible to find river water more free from organic impurities." The daily average supply for 1873 was 8,760,000 gallons, being about ninety gallons or three barrels per diem for each inhabitant, at a cost of only $1.74 per annum. The large surplus of water not directly used by the individual serves to wash the sewers, and adds another reason for the purity of the city and health of her citizens.

The permanent secretary, DR. W. B. ATKINSON, of Philadelphia, then called the roll, after which DR. BRODIE announced the following medical gentlemen from the Dominion of Canada as members by invitation: Prof. Richardson, Toronto; Dr. Casgrain, Windsor; Dr. C. B. Hall, Toronto; Dr. Robert Lambert, Windsor; Dr. A. A. Andrews, Windsor; Dr. E. Nesbitt, Sandwich; Dr. George McMicking, Goderich; Dr. F. B. McCormick, Ripon, Ont.; Dr. F. F. Bell, Amherstburgh.

DR. RICHARDSON responded for his colleagues in a few appropriate remarks.

PRESIDENT'S ADDRESS.

DR. TONER, of Washington, D. C., then delivered his address, from which we make the following extracts:

I am aware that there has been from the first meeting of this Association a contrariety of opinion as to its true province and best policy. Some would have it limited in number, exclusive and dictatorial, if not coercive, in its relation to the profession at large. There are those who would have it abandon all semblance of a convention, and devote its time to discussion of scientific facts and the recent discoveries in medicine, to the exclusion of all other questions and purposes.

A few would have it an arena where any and every subject that can enter the mind of a medical man might be introduced, without order or even definite purposes.

Others would be content and feel rewarded for the expense and loss of time in the enjoyment of the social elements so lavishly evoked on all these occasions.

But the arrangement for scientific discussions and the exchange of professional views, with the social reunions which the average judgment of the gentlemen who are in the habit of attending the meeting from year to year has approved, come as near meeting the requirements and securing due consideration to every factor, social, ethical, and professional, that enters into and serves to advance the true interests of the whole profession, and bind it in one harmonious brotherhood, as any general policy that could at present be adopted.

Aggregations of individuals form communities and intercourse establishes society. Common interests and enlightened sentiment, with frequent meetings and exchange of views, evolve dominant ideas, and dominant ideas rule not only societies like ours, but the world.

Twenty-eight years ago this Society was organized, in the City of New York, on a basis to represent the regular profession of the United States. Whether it has always acted wisely, or done the best and all that was possible under the circumstances for the elevation and advancement of the profession, must be impartially judged by our successors.

Of those who find fault I might ask: What organizations or institutions are perfect, or give even general satisfaction? They are not to be found among religious creeds, nor are they to be found in any known code of laws. They do not exist. But the great improvement taking place throughout the world in all the conditions that regulate society and protect rights of the individual, is marvellous. And though absolute perfection is not attainable, we are striving with encouraging success to elevate and perfect as far as possible the art and science of medicine. If I possessed the ability to draw a picture that could correctly represent the status of the profession and its organizations throughout our country at the period when this Association came into existence, and contrast it with one showing our present prosperous condition and numerous well-organized societies, the younger members would scarcely recognize them as representing the same profession.

It is not too much to claim that this Association, by the mere moral support it gives in encouraging the formation of local medical organizations, has done immeasurable good, and added largely to this result.

It fully recognizes the unity of the regular profession throughout the United States. At the same time it has erected a standard of medical excellence and ethical *esprit du corps* never before attained in America, and has persistently and publicly held them up for admiration and adoption. It has drawn with distinctness a line that separates the regular from the irregular practitioner, which will in the future as in the past be firmly maintained; and it is desirable, as far as practicable, to encourage uniformity in the plan and scope of all medical societies which in the sphere of their influence correspond to our civil political divisions; and

further, I think we should continue our efforts to encourage these local medical organizations until every State and county in the United States shall have its medical society, holding proper relations with each other and with this body. The Association is now, and always has been, anxious to bring into its fold the leading physicians from every State, and from every city and village and rural district in the land, and has solicited and still invites original papers on any subject that can advance medical science. It has published annually, from its organization, a volume of contributions and regular and special reports of great value in the different departments of medicine on questions of immediate interest to the profession.

After referring to the advances made in American medicine, he said:

American surgeons can justly claim to have done their part to advance its efficiency.

Their daring and successful operations, as well as their ingenious devices and numerous mechanical appliances, are the admiration of the profession everywhere.

In our cities centre not only dense populations, with great wealth, but all the conditions and institutions most favorable for prosecuting special studies in the most thorough and satisfactory manner. It is in them, as a general rule, that society fosters, and so frequently rewards with princely fortunes, the pre-eminently capable and skilful physicians, as it does men of genius in other callings.

It is true that in great cities pretenders and charlatans also prosper, but where this is a particularly noticeable fact it may, as a rule, be inferred that there is abundant room for physicians of first-class ability. Indeed, physicians possessing the latter qualifications are sure of employment, and are at home and welcome everywhere. Even the best educated neighborhoods and most highly enlightened communities, if not supplied with acceptable physicians, possessed of adequate professional knowledge and well acquainted with the latest improvements in medicine, will patronize the most plausible pretenders to such acquirements. The physician is a necessity. He is employed neither as a luxury nor from friendship; but for his actual or presumed skill and ability to prevent, relieve, or cure disease.

Progress is the order of the day—a law of the universe. He who does not constantly keep adding to his knowledge and increasing his resources, must soon fall behind the more enterprising and the better informed of his contemporaries. The physician who does not know that the community in which he lives is keeping a constant watch upon him, and contrasting his knowledge, skill, and success in his profession with those of the best and most successful medical men within the range of their reading or acquaintance, shuts his eyes to an important fact of great interest to himself. The judicious and observing know that time regulates many apparently conflicting professional interests, and sets them working in a manner that in the end promises no discredit to our calling.

It is the judgment of those who watch closely the workings of this Association that questions of a hypothetical, local, or transient character ought not to be intruded here. The time of the Association should be fully employed in scientific discussions and in the consideration of questions of necessary and proper legislation.

The absence of delegates from the Massachusetts Medical Society has been noticeable for several years. I trust that at the present meeting delegates from that old and influential organization may resume their rightful places.

It richly deserves the congratulations of the Association and the profession of the country for lopping off all irregular practitioners who by various pretexts sought to fasten themselves upon it.

The judicial council of twenty-one created at the last meeting, whose duty it is "to take cognizance of and decide all questions of an ethical or judicial character that may arise," will no doubt greatly promote harmony and facilitate the business of the Association.

It is also confidently believed that the change in the plan of conducting the business before the different sections will add to the general interest and efficiency of our meetings. This change may require us to prolong our session to at least four days. Should each chairman of the five different sections occupy the time of the general session allotted to him for an address, which shall review the progress of medicine within the scope of his section, it is not likely they could all be delivered in less than two days. The regulation adopted for the stenographic report and daily printing the remarks of members will make each speaker more deliberate, and perhaps more anxious to have his views fully and carefully stated. With a view to secure more time for our deliberations, I recommend that a regulation extending our sessions to four days be adopted. The hope entertained by some physicians of excluding irregular and unimportant productions from the profession by legislative enactments and penalties is, I apprehend, in our country not to be realized.

The thorough systematic education, the skill and availability of the services of the regular medical man, must instinctively create in the minds of the people an appreciation of his superior claims to their confidence, and thus the profession become a law for its own protection, and which must prove stronger and more enduring than acts of assemblies or rulings of courts.

Medicine has always been more advanced through the fortunate discoveries of the few original observers than it has in centuries of adherence to dominant theories.

I wish, further, to suggest or to inquire whether our influence ought not to be given to the end that all medical institutions created by law or acting under charters should be required to make and publish annual reports of their facilities, their labors, discoveries, and the extent of their operations, to the legislative body that created them.

The principle should obtain, that when a charter issues the institution assumes a public character, and should be held responsible by the public for the manner in which it exercises its privileges, raises and expends its funds, and conducts its business. The public has a right to claim this much, that it may profit by experience, correct abuses, and encourage only the deserving. It has been estimated that there are about 2,400 separate and distinct diseases. The number will probably be reduced as our knowledge of physiology and pathology and of the natural history of diseases becomes more general and accurate.

What seems at first in many cases to be a specific difference frequently disappears as we become more familiar with the range of circumstances and variations that enter into the producing causes, as well as those that may prolong and modify prominent symptoms. Hospitals for the cure and medical treatment of the insane have been provided for most liberally by the general Government and by nearly all the States. Being public institutions, and yet bearing the character of specialties, and possessing unequalled advantages, it seems but natural that the profession should expect reports from them, with records of carefully studied

cases and detailed accounts of autopsies and microscopic examinations of diseased brain and nerve tissue, of practical value to the general practitioner. A most important step has been taken in this direction by Dr. J. P. Gray, Superintendent of the New York State Lunatic Asylum at Utica, who requested that a special pathologist be appointed as his assistant in that institution. The Doctor's recommendation to this end was unanimously passed by the Legislature, and an accomplished microscopist was appointed to the position. A complete outfit for careful chemical and microscopical examinations and for autopsies, and for taking photo-micrographs of diseased organs and tissues, was provided. The late reports already attest the wisdom of the measure.

If a hospital for the exclusive treatment of cancerous diseases were opened in some of our large cities, where cases could be kept under treatment and careful observation throughout all the stages of the disease, it would supply an urgent want, and do much toward developing and discovering more efficient means for combating this terrible disease. The pathology of this malady is now perhaps better understood than is the power of remedies over it. An institution of this kind has recently been founded in England.

The number and character of the medical works and journals annually published in the United States show that there is a rapidly increasing demand by the profession of the country for the most recent views in medicine, and particularly of the leading histologists and pathologists of the world. Instead of the few, the majority of American physicians are becoming industrious readers and careful students, and demand the latest and most scientific works.

Twenty-five years ago it would have taken eight or ten years to bring new views fairly before the profession for trial that will now be read, revised, tested, confirmed or contradicted within six months, by scores of different observers throughout the country.

The telegraph even has been brought into requisition, and contributes its power to assist practitioners in distant cities to carry on consultations for the benefit of influential or distinguished persons.

The names of patients and their diseases are frequently given in the dispatches of the Associated Press, with the names of the physicians and the special treatment adopted. What more striking evidence of the progress of the age, and of the intelligence of our profession, and of the people who are interested in and avail themselves of the latest inventions and advances in the physical sciences?

There are some hundreds of young physicians of first-class ability, noted for their originality of thought and boldness of investigation, residing in different parts of our country, who are working with the scalpel and microscope and the test tube with the spirit of true philosophers. But where we have ten such we ought to have a hundred. It is from among such that must come the leading medical men of the future.

Young physicians are peculiarly adapted for experimental investigations by having the time, the enthusiasm, and the daring imagination to be original. They are also free from undue reverence for old ideas, and are without preconceived theories—conditions so essential for original experiment and discovery, for which age is found to be largely disqualified.

It is therefore chiefly to the young that the profession must look for its original work and new facts. And while we are deeply gratified and ever ready to award due praise to the retired or deceased physicians, who have fairly won, by earnest study and devotion to medicine, the highest honors of the profession, I feel it to be a duty to encourage by honorable commendation deserving young men who, by virtue of genius, industry, and force of character, are conquering obstacles to increase the knowledge of our profession and gain recognition and success. Such young men become the teachers of their teachers, the masters of the colleges.

Preventive medicine is now attracting the earnest attention of many of the most profound thinkers in the profession. Within the personal observation and memory of each of us there have been great advances made in the control and prevention of disease. There is much still to be done in this direction. I confidently look forward to the time when epidemics of cholera, yellow fever, and small-pox will be prevented with a certainty just in proportion to the dissemination of the knowledge of efficient preventive measures, and the faithfulness with which the means are applied.

I desire, also, to recommend that this Association take into consideration the question of the desirability of encouraging the formation of an International Medical Congress.

This can be done by uniting and securing the co-operation of the national medical societies of the different sections of the world. The Congress, I would suggest, ought to meet regularly every five years, or oftener, in some one of the different national capitals. The organization should be composed of delegates eminent in medicine, to be appointed from the several national medical bodies, in the proportion of say two members from each body, and an additional delegate for every one hundred active members. The purpose of the Congress should be to confer and consider, from an international point of view, all questions that are promotive of public health, the advance of medical knowledge, and the true interests of the profession throughout the world. The present rapid and frequent communication of all civilized countries with each other makes us all akin, and the advancement of science renders this kind of professional intercourse desirable, to the end that frequent and free exchange of all that is known to be new and useful in medicine may be speedily brought to benefit mankind in every clime. The progress of science, the facility of intercommunication, the general and widespread intelligence, the claims of humanity, and the aspirations of the age and of our noble profession demand the formation and support of some such organization.

Should the measure suggested meet the approval o this Association, the steps proper to be taken to secure co-operation in the proposed organization and all the details can be left to a committee.

I suggest that an effort be made to have the first meeting held in Washington City some time during the summer of 1876, while the American International Exposition is being held in Philadelphia.

The departments of the national government in which exist an organized medical corps, the army and the navy, need no special mention or encomiums from me. Their well-conducted bureaus and the highly accomplished *personnel* of the medical staff corps are the pride of the profession of the whole country. Their works speak more fittingly of their praise than could any words of mine. The great army pathological museum and the magnificent medical library which their thoughtful consideration for the profession has created, fully attest their devotion to their high trust and their love for advancement of medical science.

Within a few years a third medical department, known as the Marine Hospital Service, under the immediate direction of the Secretary of the Treasury, has come into existence. It is under the supervision of an

able medical officer, and the purpose is to provide hospital accommodations and medical treatment for sick seamen belonging to the merchant marine of the United States. At most of the ports contracts are made with the local hospitals to receive and treat the sailors.

The government owning but ten hospitals, it consequently makes but few medical appointments. The service is, therefore, small, and may, from its importance, be considered in a formative state.

The medical officers of the army have not yet received that consideration and relief from Congress which you recommended at your last meeting. The committee appointed by you drew up a memorial, which was duly presented to Congress; they also called in person upon the members of the Military Committee of the Senate and House of Representatives, and prepared a bill entitled "A bill to increase the efficiency of the medical department of the army," which, if passed, would place the medical staff upon a footing of equality with the other staff corps. This bill was introduced into the House of Representatives January 6, 1874, read twice, and referred to the Military Committee, who have not yet taken any definite action on the subject.

Meanwhile the action of the American Medical Association and your committee has been heartily indorsed by the general State and county medical societies, almost every one of which has passed resolutions on behalf of their brethren in the army, and forwarded them to their representatives in Congress.

The medical profession of the United States can never be content that the medical officers of the army shall continue to be treated with less consideration in the matter of rank and pay than the officers of other staff corps, or of the medical corps of the navy, and will never cease their appeals to the representatives of the people until justice is done to this deserving body of medical men. I recommend, therefore, that a larger committee be appointed to plead their cause anew; that we may, if possible, secure favorable legislation before the present Congress adjourns, or, if this prove impracticable, that we may bring the matter to the attention of the next Congress so soon as it convenes.

The systematic observations in meteorology that are being made throughout the country, under the direction of the United States Signal Office and the Smithsonian Institution, promise in their results to be of great value in the study of climatology and the causation of disease. I hope to see that system widely extended and its stations multiplied throughout the whole country.

Electricity justly deserves the careful attention which has recently been given to it by a number of medical observers in our own and other countries.

It is well known that electricity is manifested in different forms, as frictional electricity, galvanic electricity, and magneto-electricity. Each of these forms has probably different effects on living organisms, and each should receive special attention from the profession.

It has been found that a current of electricity passed from the extremity toward the centre affects the nerves differently from a current passed in the opposite direction. It is hoped the great power this agent is known to exercise over nutrition may be made serviceable in changing or retarding morbid growths and in reviving lost nervous and muscular strength.

Within the last few years several additions of great therapeutical importance have been made to our *materia medica*, and it is worthy of note that the most valuable of these are not simple substances existing ready formed in nature, but organic compounds which we owe to the patient investigation of modern chemistry, and that their medical uses have not been ascertained by the accidental chances of a blind empiricism, but discovered in the course of exact experiments into the physiological effects of various organic substances, undertaken and carried out with all the precautions and refinements suggested by modern science. As examples of the class of experiments from which such results are to be anticipated, I may refer to those of Dr. H. C. Wood, in our own country; in Europe to those of Richardson and Liebreich.

The latter observer has been singularly fortunate in discovering the therapeutical value of two new bodies, which, like chloroform, are chlorine compounds, and which, like it, though in a somewhat different manner, are of singular efficacy in procuring rest and the relief of pain. I refer to chloral hydrate, which has already gone into such extensive use, and to the new anodyne, croton chloral hydrate. Is it not a hopeful sign of the times that we should owe such remedies to that very spirit of exact science which is so often unjustly accused of tending toward nihilism and scepticism in medicine?

The address was listened to with a deservedly respectful attention, and at its conclusion received the hearty approval of the Association.

After the conclusion of the address, Dr. Parvin, of Indiana, moved that the recommendations contained in it of the President be referred to the following committee:—White, of New York; J. D. Jackson, of Kentucky; Bartlett, of Wisconsin; Shippen, United States Navy; and Westmoreland, of Georgia. The motion was adopted.

Announcements of papers to be presented to the Association were made, and were referred to the appropriate sections.

The Committee of Arrangements announced that every morning delegates would be furnished with a full programme of the day's exercises, including the papers to be read in each section.

On motion the delegates from each State were instructed to meet at half-past eight o'clock, Wednesday morning, to select chairmen for their respective delegations.

The Association then adjourned to meet at 9 A.M. on Wednesday.

Second Day—Wednesday, June 3.

In consequence of the want of room in the Detroit Theatre, the place of meeting was changed to the Opera House.

The Association was called to order by Dr. Toner, President, after which the programme of the day was read by Dr. Brodie.

COMMITTEE ON NOMINATIONS.

The following Committee on Nominations was announced:—Arkansas, —— ——; Alabama, Jerome Cochran; Connecticut, B. H. Catlin; California, G. L. Simmons; Colorado, H. H. Byford; District of Columbia, Johnson Eliot; Delaware, R. R. Porter; Florida, —— ——; Georgia, W. F. Westmoreland; Illinois, W. H. Byford; Indiana, R. N. Todd; Iowa, J. C. Roberts; Kansas, C. V. Mottram; Kentucky, E. Richardson; Louisiana, —— ——; Maine, A. Garcelon; Massachusetts, L. T. Warner; Maryland, E. Lloyd Howard; Michigan, Foster Pratt; Minnesota, E. C. Cross; Missouri, Wm. S. Edgar; Mississippi, A. G. Smith; Nebraska, N. T. Anderson; New Jersey, Chas. F. Dishler; New York, J. Marion Sims; New Hampshire, J. F. Carr; North Carolina, —— ——; Ohio, E. H. Hyatt; Oregon, —— ——; Pennsylvania, Ben-

jamin Lee; Rhode Island, Joab Kenyon; South Carolina, A. N. Talley; Tennessee, Wm. T. Briggs; Texas, H. W. Browne; Virginia, —— ——; West Virginia, John C. Hupp; Wisconsin, J. B. Whiting; United States Army, Joseph R. Smith; United States Navy, —— ——.

PERMANENT MEMBERS.

Dr. F. M. Wilder, of Chicago, Illinois, was elected permanent member. Dr. Charles E. Slocum, of Defiance, Ohio; J. C. Slocum, of Shelby, Indiana; Drs. Nesbitt, Sandwich, Ontario; Bell, Amherstburgh, Ontario; McCormick, Peche Island, Ontario; Scott, Woodstock, Ontario; McLean, Kingston, Ontario; Moore, London, Ontario; Wm. Canin, Toronto, Ontario, were elected members by invitation.

Dr. R. R. Potter, of Delaware, introduced a resolution to the effect that in the recommendation and appointment of committees, preference should be given to those who were present. Adopted.

REVISION OF THE CODE OF ETHICS.

Dr. N. S. Davis, of Illinois, Chairman of the Judicial Council, then read the following report:

The undersigned committee, to whom was referred the question of a general revision of the code of ethics of the American Medical Association, respectfully report as follows:—Soon after the adjournment of the annual meeting in May, 1873, the chairman of your committee, being desirous of ascertaining how far there existed a desire in the minds of the profession to have the code changed, addressed letters of inquiry to thirty or forty men in different parts of the country who might be supposed to represent the general sentiment of the profession in their respective districts, from twenty-five of whom answers were received. Fourteen expressed an entire approval of the code as it is, and thought it better to attempt no changes. Six were opposed to any general revision, but supported slight changes in some sections, while only five expressed such dissatisfaction as to indicate a desire for thorough revision.

If these correspondents might be regarded as fairly representing the profession, any important changes in the code would be in direct opposition to the wishes of a large majority of those for whose guidance it was framed. Those who have expressed a desire for changes in the present code are readily divided into two classes. The first class appear to look upon a code of ethics in the same light as ordinary by-laws, and consequently regard all in the present code relating to the duties of patients to their physicians, of the public to the profession, and of the profession to the public, as superfluous and useless. They would retain nothing except the rules governing the intercourse of physicians with each other, and a very few of this class object to any *written* rules, claiming that the unwritten sense of *honor* belonging to members of an educated profession is sufficient to afford all needed guidance and control. It seems to us that the objections of this whole class are founded on a narrow and imperfect conception of the real nature and objects of an ethical code. The latter, instead of consisting of a set of rules or by-laws, simply defining the duties and privileges of members of some organized society, should be a concise and full exposition of the relations sustained by a profession to the rest of the community, the mutual obligations imposed by such relations, and the rules governing members in their intercourse with each other. Hence, a code of ethics for our profession must partake, more or less, of the nature of a moral essay, developing principles for guidance equally applicable to all places and times, instead of a few simple rules applicable to the members of some particular society. It was with this view that Dr. Percival wrote his celebrated essay in the latter part of the last century, and which has been regarded as a standard authority in Europe from that time to the present. The same idea evidently controlled the very able committee appointed by the preliminary convention in 1846, to report a code of ethics for the profession of this country, and who gave us the admirably concise and well-arranged summary of the principles involved by Percival, which constitutes our present code.

To strike out, as some have proposed to do, all relating to the duties of patients, the community, and the public toward the profession, would be to destroy the completeness of the work, and obscure the meaning of what was retained. For the members of any given profession cannot rightly appreciate the relations they sustain to each other without considering at the same time their mutual relations and duties to the community in which they live. After a very careful examination, we are satisfied that our present code of ethics presents the true ethical relations and duties of the profession in a form as concise, as well arranged, and as complete as it is possible to express them. The principles and rules of conduct enumerated are clearly stated, and are equally applicable for the guidance of all who attempt to practise the healing art, whether they are members of any medical organization or not.

The second class, whose members desire alterations in the present code of ethics, do not object to its general scope, but ask for amendments or additions to particular sections only. With only a few and unimportant exceptions, these propositions all relate to two subjects, namely, *specialties* and bestowing professed services by *contract*. Concerning the first of these there seems to be much false reasoning and needless irritation. If *specialists*, or those who limit their practice to some one class of diseases or accidents, are members of the profession, it follows logically that they must be governed in all respects by the same ethical principles as the general practitioners; for no enlightened body of men can consistently have one code of morals for one part of its members and another code for the rest. Whatever may be regarded as derogatory to the dignity and welfare of the general practitioner must be equally so to the specialist, so long as he is recognized as a member of the profession. If the one may not issue cards, hand-bills, etc., calling the attention of those laboring under particular diseases to themselves, neither can the other without violating the principles of both justice and equality.

Then the code of ethics very properly makes no mention of specialties or specialists, but presents plainly the rules necessary for the maintenance of professional character as applicable to all. But we are asked how, then, can those who wish to pursue a special practice make known their position to their brethren and the public? We answer that the title of Doctor of Medicine covers the whole field of practice, and whoever is entitled to that appellation has the right to occupy the *whole* or any part of the field, as he pleases. The acceptance of this honorable title is presumptive evidence to the community that the man accepting it is ready to attend practically to any and all duties which it implies. As all special practice is simply a self-imposed limitation of the duties implied in the general title of doctor, it should be indicated, not by special or qualifying titles, such as *oculist*, *gynecologist*, etc., nor by any positive setting

forth of special qualifications, but by a simple, honest notice appended to the ordinary card of the general practitioner, saying, "Practice limited to diseases of the eye and ear," or "to diseases peculiar to women," or "to midwifery exclusively," as the case may be. Such a simple notice of limitation, if truthfully made, would involve no other principle than the notice of the general practitioner that he limits his attention to professional business within certain hours of the day. Neither could it be regarded as a claim to special or superior qualifications. To give the specialist any privilege beyond this would be to invest him with a special privilege, inconsistent with the equality of rights and duties pertaining to the whole profession. We see no reason, therefore, for recommending any change in the present code of ethics in reference to this subject.

The remaining topic, concerning the bestowal of professional services under specific *contracts* specifying the amount of pecuniary compensation, is of sufficient importance to require careful attention.

The present code of ethics, while sanctioning a most liberal bestowal of gratuitous professional service to the poor, whether as individuals or in public charitable institutions, and in aid of the sanitary interests of the communities, yet expressly prohibits the bestowal of such services on well-to-do individuals, endowed, mutual benefit, or any kind of money-making institutions, societies, or corporations. It also expressly prohibits all attempts to attract attention and make merchandise of charity by ostentatiously parading before the public notices proffering services and medicine to the "poor gratis." We see no reason why this is not sufficient so far as relates to the regulation of gratuitous services. To govern the matter of compensation the code simply gives us the following general declaration:—"Some general rules should be adopted by the *faculty*, in every town or district, relative to *pecuniary acknowledgments* from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit." The aim appears to have been to allow sufficient variations in the rate of compensation to accommodate the varying habits and circumstances of different communities, and yet to bind each individual to an honorable compliance with the general rules established by his professional brethren. Such being the correct ethical principle, the difficulty consists in tracing and maintaining clearly its practical application. That the principle laid down in the paragraph just quoted is inconsistent with all contracts or agreements to attend individuals, families, companies, corporations, or any associations or institutions other than those of a strictly charitable character, for a specified sum per month or year, without regard to the amount of medical services that might be required in the time specified, no one can reasonably doubt. It seems to us equally inconsistent with the ethical rule to enter into a contract with a manufacturing company to attend their employés, or with a school to attend its patrons or scholars, for a fixed sum per annum, to be derived from the levy of a certain percentage on the wages of the employés or on the tuition fees of the students; for however plausible may be the humanitarian idea of securing for the employé and the student adequate medical attendance when sick at the smallest average cost, the practical working of the system violates both the rule that compensation for medical services should be in accordance with the kind and amount of services rendered, and that every individual and family should be free to choose their own medical attendant without dictation or indirect restraint.

These observations do not apply to a certain kind of contract service sometimes required in connection with the medical staffs of the army and navy, nor to the hospital tax on sailors in the marine hospital system, for reasons too obvious to require mention. One other subject requires a few moments' attention. There is a class of public charitable institutions, such as county almshouses, orphan asylums, etc., supported by public taxation. In many of the States the public authorities having control of such institutions have annually asked for bids from the profession, offering to award the contract for professional services to the one who should bid for the lowest pecuniary consideration.

While as charitable institutions any member of the profession might offer his services to such of the poor inmates as might ask for them gratuitously, yet the idea of asking members of the profession to bid against each other for the pay for public professional services is repugnant to every feeling of professional honor, and often productive of great injustice to the sick poor.

The public authorities in all such cases should fix such just rate of compensation for the necessary medical services as they may deem best, and then appoint the best medical man who is willing to accept the compensation proposed. And we have no doubt but that a proper attention to this subject on the part of the profession would secure the necessary change.

It is, however, very desirable to so manage all our pecuniary relations with the public, and especially with municipal and legislative authorities, that we avoid creating the impression on the public mind that the profession and its social organizations are little better than mere trades-unions, having for their chief object mutual pecuniary protection. After carefully reviewing the whole subject, your committee do not recommend any alteration in the present code of ethics. On the contrary, we desire to express the opinion that if every medical school and society would supply each graduate as he left the school and each member initiated into the society with a printed copy of the code, accompanied with the injunction that it be carefully studied, it would be productive of much good, directly to the profession and indirectly to the community.

N. S. DAVIS.

DETROIT, June 2d, 1874.

After a little discussion the report was unanimously adopted.

AMENDMENTS TO THE PLAN OF ORGANIZATION.

The following amendments to the plan of organization proposed at the last session of the Association, were read by DR. DAVIS, of Illinois:—

The following amendments to the plan of organization are to be acted upon:

By Dr. N. S. Davis, Illinois:

Strike out the second paragraph of Article II. and insert the following:

"The delegates shall receive their appointment from permanently organized State medical societies and such county and district medical societies as are recognized by representation in their respective State societies, and from the medical department of the army and navy of the United States."

Also, strike out the fourth paragraph of same article, and insert:

"Each State, county, and district medical society, entitled to representation, shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number.

"The medical staffs of the army and navy shall be entitled to four delegates each."

By Dr. P. Pineo, of Massachusetts:

Art. II., second paragraph, after "Army and Navy," insert "and the Marine Hospital Service of the United States."

By-laws, section 6, after "the chiefs of the bureaus of the army and navy," insert "and the supervising surgeon of the United States Marine Hospital Service."

By Dr. E. L. Howard, of Maryland:

Art. IV. Strike out second clause of first paragraph and insert:

"They shall be nominated by the Judicial Council, and shall be elected by vote on a general ticket."

By Dr. A. S. Maxwell, of Iowa:

"*Resolved*, That in view of the many and important duties imposed upon the nominating committee, the medical society of each State and Territory that elects delegates, be requested, when selecting delegates, to nominate one member of such delegation as their member of the nominating committee, and also designate the mode of filling vacancies."

By Dr. A. M. Pollock, of Pennsylvania:

Art. VI., first paragraph, strike out the word "five" and insert "ten."

By-laws, Art. 5, first paragraph, strike out "five" and insert "ten."

Dr. Reyburn, of the District of Columbia, asked if it was intended by the first amendment to exclude Territorial representation.

Dr. Davis said that when this Association was formed there were but few local organizations, and but few existed for the first few years, and therefore, to make the Association a success, the basis of representation was made broad. Now the Association has grown in strength and abuses have crept in. It has now been thought best to avoid endless discussions here. It has been found that now an endless variety of institutions are represented, some of them utterly irresponsible; consequently there has been a loud outcry for a stricter basis of representation, and therefore we wish to recognize none but representatives of organized State, Territorial, district, and county societies, and local societies which are recognized in their respective State organizations.

Dr. Woodward asked how this would work where there were more than one worthy society in one place.

Dr. Davis.—All local societies recognized by their own State organizations could be admitted.

Dr. Busey, of Washington, asked how they could limit representation in this way, when reputable local societies could be multiplied in all large cities, and offered the following proviso:

Provided, however, that the number of delegates from any particular State, Territory, county, city or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the code of ethics of this Association.

Dr. Davis approved of and seconded the adoption of the proviso, but he thought there was no such danger as the gentleman apprehended.

Dr. Woodward, D. C., said that in the District of Columbia the representation could be unlimited.

Dr. Busey said that now this had been brought down to one in ten.

Dr. Quimby, of New Jersey, opposed making the representation too limited.

Dr. Lillie, of New Jersey, said that all trouble had come from local organizations and men not recognized by the State organizations. He instanced the system in his State, and said he was directed to urge the passage of the amendment

The proviso was adopted.

The report and resolution were adopted by a large majority.

SECOND PROPOSED AMENDMENT.

Dr. Atkinson moved that this be so worded as to limit the marine department to one representative.

Dr. Busey objected on the ground that an irregular practitioner might be appointed.

Dr. Davis thought there was too much political influence in the Marine Hospital Service to admit of its recognition, and moved that the amendment be laid upon the table indefinitely. Carried unanimously.

The Third Proposed Amendment.—On motion of Dr. Reyburn, this was laid upon the table without debate.

The Fourth Proposed Amendment.—This was opposed by Dr. Kellar, and on his motion was tabled with significant approval.

The Fifth Proposed Amendment, on motion of Dr. Atkinson, was laid on the table without debate.

ARMY MEDICAL STAFF RANK.

Dr. Keller, chairman of the Committee on Rank of the Medical Staff of the Army, read the following report:

Your committee have the honor to report that immediately after the adjournment of the St. Louis meeting they took steps to ascertain the status of the medical staff of the army under existing laws, and conferred with a number of the medical officers as to the best method of securing for them that equality with the other staff corps in the matter of rank which it is undoubtedly just and right that they should enjoy.

Your committee then drew up a memorial to Congress setting forth the facts of the case, and presenting the draft of a bill which, if it should become a law, would afford the relief asked by the medical corps without injury to any other branch of the public service. This memorial was printed, and copies forwarded to each member of the American Medical Association and to the various State and county medical societies, with a letter requesting their co-operation.

In response to this appeal the several local societies have passed resolutions endorsing the action of the American Medical Association and of your committee, and asking favorable legislation by Congress. These resolutions have been forwarded to the respective Senators and Representatives.

Shortly after the commencement of the present session of Congress your committee waited upon the military committees of the Senate and House of Representatives, presented the memorial, and urged the adoption of the bill by which it was accompanied. The bill was accordingly introduced into the House of Representatives, January 6, 1874, read twice, and referred to the Military Committee, by whom, we regret to say, no action has as yet been taken on it.

Notwithstanding this failure to secure prompt legislation by Congress in behalf of our brethren in the army, your committee are of opinion that by continued exertion our object can probably be attained during the next session of that body. The present session has, as it happens, been an unfortunate one for urging claims of the medical staff. In consequence of the financial panic of last fall the utmost economy in all administrative matters has been attempted, and at the time your committee presented its memorial to Congress a very considerable reduction in the army had been proposed and was under consideration. So far as your committee can judge it is now very improbable that any such reduction will be made, but the fact that it has been under consideration was no doubt the

chief reason why the bill introduced January 6th has not yet been acted upon. We therefore recommend the appointment of a new committee to memorialize Congress at its next session, and think it desirable that it should be composed of one member from each State, as provided in the following preamble and resolutions, the adoption of which are respectfully recommended:

Whereas, We have learned with regret that Congress has not as yet acted favorably on our memorial in behalf of the medical corps of the army; and whereas it is our opinion just and right that the rank of the medical officers of the army should be fully equal to that of the officers of the other staff corps, or of the medical corps of the navy, which we are informed is not the case under existing laws; therefore,

Resolved, That a committee of one from each State and Territory be appointed by the President for the purpose of memorializing Congress on this subject, and of securing the co-operation of the several State and county medical societies for the same purpose.

J. M. KELLER, Kentucky,
Chairman of Committee.
JOHN A. MURPHY, Ohio.
N. S. DAVIS, Chicago, Ill.
H. F. ASKEW, Wilmington, Del.
J. M. TONER, Washington City.

Surgeon WOODWARD, of the army, on behalf of the medical department of the United States Army, thanked the committee for the report, and concurred with the views expressed in regard to the effect of the panic upon the action. He explained the action of the present law upon the rank of army medical officers.

He therefore offered the following amendments to the resolutions. After the word "territory" insert the words "with power to fill vacancies," omit the words "by the President" and add the following:

Resolved, That Dr. J. M. Toner, of the District of Columbia, be chairman of said committee, and that the other members of the committee be appointed by the President.

Unanimously adopted.

The Catalogue of the Army Medical Library was accepted with thanks, and the following letter was read:

WAR DEPARTMENT, SURGEON-GEN.'S OFFICE,
WASHINGTON, D. C., April 11th, 1874.

DR. J. M. TONER, President of the American Medical Association, Washington, D. C.:

DEAR SIR:—By directions of the Surgeon-General, United States Army, I have the honor to forward, for presentation to the American Medical Association, a copy of the catalogue of the library of this office, in three volumes, royal 8vo., and to call the attention of the members of the Association to the character of the collection and to the deficiencies which still exist in it. Since the printing of this catalogue a large number of foreign medical theses and pamphlets have been added to the library, making the total number of its titles about 65,000; but large as this may appear, it is not more than one-third of what our national medical collection should contain, in order to place the medical writers and teachers of this country upon an equality with those of Europe in regard to facilities for consulting the literature of their profession.

The catalogue now presented is an alphabetical one of authors, and only a sufficient number have been printed to supply the principal libraries and medical journals; hence it is impossible to supply copies to individuals. But a catalogue is now in course of preparation, arranged according to subjects, of which it is hoped that a sufficient number can be printed to supply those who need such a work. It is very desirable that, during the coming year, the deficiencies of the collection, especially in American medical literature, should be filled as far as possible, in order that the subject catalogue may present a good bibliography of the subject, and to this end the assistance of physicians throughout the country is especially requested as regards the completing the files of American medical journals, transactions of medical societies, announcements of medical colleges, and reports of hospitals, asylums, boards of health, etc., etc. These medical pamphlets cannot be purchased, and the only prospect of obtaining them is from the garrets, closets, and shelves of physicians who may have preserved them, and may be willing to part with them in consideration of the importance of the object for which they are desired.

Very respectfully, your obedient servant,

J. S. BILLINGS,
Assistant Surgeon United States Army.

REPORT ON BAY COUNTY DELEGATES.

The Judicial Council, through their secretary, reported the following decision in reference to the case of the disputed Bay County delegations. By the constitution this decision is final.

MR. PRESIDENT—The case of the Bay County Medical Society, referred to the Judicial Council for adjudication, would respectfully report that they have declined to receive the delegates from both societies on account of irregularities.

S. N. BENHAM,
Secretary.

ANNUAL ADDRESS ON PRACTICAL MEDICINE.

DR. N. S. DAVIS, President of the Section of Practical Medicine, Materia Medica, and Physiology, read the following address:

MEMBERS OF THE ASSOCIATION—By an amendment of the constitution of this national organization, adopted at the annual meeting in 1873, it becomes my duty on the present occasion to report to you "the more important advances and discoveries of the past year" in the department of Practical Medicine, Materia Medica, and Physiology.

To judge correctly concerning the improvements and discoveries made in any important department of science or art in a single year, requires a minute knowledge both of the preceding condition of such science and of its entire literature for the year under consideration. Hence, the task involves much labor, and its proper performance needs the exercise of sound judgment; for it is not every novelty that constitutes a discovery, nor every new phraseology in the expression of ideas or facts that constitutes an actual advancement.

Perhaps the chief improvements or additions to our knowledge in the department of physiology during the year ending April 1st, 1874, are such as relate to the functions of the brain and nervous system. The experiments of Fritsch and Thitzig, Nothnegal, Fourney, Ferrier, Dupuy, Carville, Bartholow, and others, for the purpose of determining more definitely the functions of particular parts of the brain, have attracted much attention. The novel methods adopted by these experimenters, consisting in some instances in the injection of distinctive substances, colored with aniline, into the substance of the brain, and in others in the application of electric and galvano-electric action to limited portions of the cerebral hemispheres, and the striking results that followed, were thought by many to have brought a new era in the development of cere-

bral physiology, and to have overthrown many of the opinions hitherto regarded as well founded. Up to the time of these recent experiments it was supposed that the gray matter of the cerebral periphery, being the seat of mental perception, was not amenable to direct excitation by stimuli. But when Ferrier laid bare the surface of the convolutions, and by applying his blunt electrodes induced with readiness and apparent uniformity certain muscular movements, according to the convolutions touched, it appeared to demonstrate not only sensibility of the cerebral surface to stimuli, but also the special localization therein of motor functions. By the subsequent investigations of Dupuy, as detailed in his inaugural thesis, it is shown that the faradic currents used by Ferrier could not be restricted to the peripheric layer of the brain, but they readily penetrated to the striated matter and central ganglia, and therefore produced their effect on muscular movements by direct excitation of these deeper-seated parts. M. Carville, in repeating the same methods of investigation, more especially with the animals experimented on under the influence of anaesthetics, obtained results confirming the views of Dupuy. Very recently Dr. Bartholow, of Cincinnati, availed himself of an opportunity to perform a limited number of experiments on the brain of a patient, a large part of whose skull had been removed by disease in such a manner as to leave a considerable extent of cerebral surface bare, including portions of both hemispheres.

The mode of experimenting differed from that of Ferrier, chiefly in the use of fine needle electrodes penetrating the brain substance, instead of blunt ones resting on its surface. The results in producing muscular movements corresponded closely with those obtained by Ferrier on animals. And when during the third experiment the faradic current was rendered more intense, decided epileptiform convulsions ensued. While the results of these few experiments on the human brain correspond closely with those obtained by Ferrier, yet they are still more amenable to the objections made by Dupuy and Carville, because in making a subsequent *post-mortem* examination Dr. Bartholow found his needle electrodes had penetrated from one to one and a half inch into the cerebral substance. The whole history of experimentation involving the injury or mutilation of animals, for determining the functions of any part of the nervous system, shows that conclusions must be drawn from them with great caution. From a careful review of all these recent and highly interesting experiments, their combined results appear to confirm the previous views concerning the functions of different portions of the brain, instead of overthrowing them. And if they have added anything to our physiological and anatomical knowledge, it is in indicating more definitely the exact points or localities in the periphery, where the striated fibres forming the medium of communication between the central ganglia—as the corpora striata and optic thalami—and the gray matter of the convolutions touch the latter.

We had regarded these results of previous physiological experiments in connection with many pathological phenomena as sufficient to indicate clearly a primary centre for ordinary sensation in the optic thalami, to which impressions from all points of the body are transmitted by one set of nerve filaments, and from which they are transmitted to some point in the periphery by some of the white fibres intervening between these bodies and the gray matter of the convolutions, when the impressions are mentally recognized, and the resulting volition is sent from the same part by another set of white fibres, first to the central ganglia represented by the corpora striata, and from thence to whatever set of muscles are required to obey the mandate of volition. Instead of indicating any new functions in the convolutions, or spinal organs of muscular sense, the recent experiments have simply indicated more directly the particular convolutions in contact with the conducting fibres communicating through the common centre, with particular sets of muscles. The observations of Dr. Eichorst (see Virchow's Archiv) on the degeneration and regeneration of cut and injured nerves are interesting and important. They were made on the nerves of rabbits, and appeared to establish the fact that cut and injured nerves first exhibit an accumulation of granular matter, increasing the bulk which appears to arise from a breaking up or degeneration of the medullary matter of nerve. The sheath or schwann and the perineum become swollen from serous trasudation, while the axis cylinders remain but little changed. During the second week these exudative and degenerate changes gradually disappear, and the process of regeneration becomes visible in the form of delicate and slender threads running into and extending from the injured end of the nerve. This reparative action is observable at the end of the second week, and continues several weeks before it becomes complete. Dr. Eichorst made no observations in regard to the time required for the nerve function to be restored. But from the slowness of the reparative process, as well as from other recently observed facts, it is rendered probable that those cases of apparent speedy restoration of function after injury or excision of nerves, reported by surgeons, have been instances in which the parts received nerves from other sources. While I would not discourage investigations in any direction, or in any degree undervalue the importance of a correct physiology of the nervous structures entering into the human body, yet I am strongly impressed with the idea that we are attributing too much to nerve influence, and too little to the influence of properties inherent in all living structures. We have come near to the standpoint of referring all impressions, healthy and morbid, to a primary reception by some part of the nervous system, and as a consequence of regarding all vital actions as in some way dependent on nervous influence. In this we are confounding nerve *sensibility* and nerve *force* with properties that are inherent in living organic matter, and are as clearly appreciable in the primary germinal cell, or granule of bioplasm, as in the most highly organized nerve structure. I do not allude to vitality or the abstract principle of life, for *it* is doubtless beyond human comprehension. Imparted primarily by the Creator, to matter in certain modes of combination, and perpetuated by parent to offspring throughout the whole domain of organic nature, both vegetable and animal, it stands in its relation to the human mind as an ultimate fact, incapable of further analysis or explanation.

But when matter is thus endowed with vitality it possesses certain properties that can be studied and comprehended as readily as we study the properties of inorganic matter. It is as easy to demonstrate that the germinal cell of the ovum or the acorn possesses a susceptibility to the presence of certain exterior agents, as heat, moisture, electricity, and a peculiar affinity by which it elects and combines with certain atoms of matter and rejects others, thereby effecting determinate changes that we call growth, as it is to demonstrate that an acid will unite with a base, or that the presence of a second acid will cause the rejection of the first and the formation of a new compound. Susceptibility and vital affinity are properties common to all living organic matter, whether in the primary germinal specks of bioplasm or in the most complex structures of the

human body. And they exert a controlling influence in all that relate to molecular changes in assimilation, nutrition, disintegration, secretion, and as a consequence in the evolution of caloric. These properties are capable of being modified or acted upon directly by all those pervading forces, sometimes styled imponderable agents, such as electricity, heat, light, etc., and by the presence of many alimentary and medicinal agents. They are in no sense derived from the nervous structures, and can be modified only indirectly by nerve influence. Every system of physiology which does not recognize these elementary properties of all living matter as distinctly as it does the special functions of each organized structure, will be found defective. Not only will it be defective as a branch of science, but as the basis or point of departure for the study of pathology, it will continue to involve us in doubt, obscurity, and false conclusions.

Materia Medica.—The past year has not been made notable by the discovery of any new and valuable article of the Materia Medica, or by new applications of old remedies of such importance as to be worthy of special mention. What we most need, however, in this department, is not the addition of new articles or new applications of old ones, but a more complete knowledge of the composition and properties, with a more exact appreciation of the *modus operandi*, of such as are already on the officinal list. The progress of organic and analytical chemistry, and their application to the investigation of the composition and properties of medical agents, is constantly separating out the active principles and presenting them for use in more convenient and reliable forms; but most of our methods of testing the effects of medicines on the various functions of the human body are extremely defective. So true is this, that the most diverse opinions still exist concerning the action of many of the oldest and most frequently used articles of the Materia Medica. And not a few of them—like opium, quinine, alcohol—are commonly regarded as capable of exerting directly opposite effects by simply altering the dose. That is, we are told that in small doses they are stimulant or tonic, and in large doses sedative or narcotic, but at what point in the progress of increasing the dose the action becomes reversed, no one appears able to point out with exactness. Perhaps in no other department of medicine do we find opinions and conclusions derived from investigations so partial or incomplete; and the adherence to names and classifications involve so much confusion. It is to this condition of our Materia Medica that we owe many of these apparently contradictory modes of practice, which have done so much either to create scepticism both in and out of the profession, or to fasten the theory that the type and character of diseases change with the cycles of time. The idea that the special type and character of diseases have undergone marked changes, and are far less active or sthenic now than in the earlier part of the present century, has become very general both in and out of the profession. And this is alleged as a reason for the change in practice from depletion and antiphlogistics to nourishment and so-called stimulants. But if we analyze more closely the development of opinions and modes of thought, as presented in the medical literature of the last half century, we shall be forced to the acknowledgment that the idea of change in the character of diseases has followed rather than preceded the changes in the modes of practice, and that it really has no other appreciable facts on which to rest. In other words, it will be found to have been a simple theoretic idea, suggested to avoid the difficulty and scepticism arising from such various and apparently contradictory modes of practice.

We say *apparently contradictory*, for it is not certain that a more careful review of the *modus operandi* of the remedial agents used would not show the most diverse in appearance to have really reached the same end by different routes. For example, on the assumption of the chronic physiologists that alcohol is respiratory food, acting as a stimulant to the organic functions and sustaining the temperature of the body, nothing could appear more opposite than to treat one case of fever or acute disease with arterial sedatives, evacuants, and alteratives, and another case of the same disease with alcoholic liquids and nourishment. But when we turn from the theoretical assumption to the results of positive experimentation we find the ingestion of alcohol to be followed by a reduction of temperature, a retarding of capillary circulation and molecular change, and a diminution of nerve sensibility. In other words, we find the *assumed* stimulant to be a positive and universal *sedative* to organic and molecular changes, and anæsthetic to nerve sensibility.

Hence the practitioner who plies his patient freely with wine, whiskey, or brandy is as certainly holding him under the influence of a powerful sedative as was his ancestor who bled and physicked, or his cotemporary who gave veratrum and alteratives; and we need resort to no supposable change in the type of disease to understand why all, if wielding their weapons with equal skill, arrive at very similar results. As already intimated, there is no other department of medicine that so urgently needs a thoroughly critical and experimental revision as our Materia Medica. The work should be carefully planned and persistently pursued until the erroneous phraseology is corrected, and the mass of speculations and mere assumptions are replaced with positively observed facts.

Practical Medicine.—In the department of Practical Medicine, as in the case of Materia Medica, the past year has revealed no striking discoveries either in regard to the nature of sickness or the method of treatment; yet it has been characterized by a genuine progress that is worthy of careful study.

History is said to be ever repeating itself. The human mind is ever tending to extreme views in all departments of study, and to hasty generalization from facts insufficient in number and imperfectly observed. And in no department of literature and science are these tendencies more strikingly illustrated than in the history of practical medicine.

The pendulum of professional opinion and practice has swung from one extreme to another with almost as much regularity and certainty as if moved by the force of gravity. During the first half of the present century professional practice had reached the extreme of depletion and evacuants, when, checked by its own abuses, the return wave carried us in the short space of three decades, first to conservatism or expectancy, and then to full stuffing and so-called stimulation; until wine, brandy, and indiscriminate nourishment were made the instruments of abuses no less injurious to the human family than blood-letting and evacuants in their palmiest days. This last swing of the professional pendulum has just reached its widest divergence from the perpendicular, and one of the most gratifying evidences of progress in practical medicine the past year consists in the plain indication to be seen in various quarters that the pendulum has fairly commenced its return motion. The constantly increasing importance attached to fresh air, pure water, and frequent ablutions in the sick room; the more careful adjustment of the quantity and quality of food to the

capacity of the digestive organs for acting on it; the rapidly increasing condemnation of the indiscriminate use of alcoholic and other anæsthetic and narcotic agents; the occasional unsheathing of the long neglected lancet, with here and there a bold, outspoken advocacy of its judicious use; and above all, the better appreciation of the fact that a retardation of tissue metamorphosis and elimination is by no means equivalent to assimilation and nutrition, either in health or disease, are marks of a genuine progress that can be easily recognized in the literature of practical medicine during the past year. And happy would it be, both for the profession and the public, if the return wave of thought, investigation, and practice, now fairly begun, could be so guided by a higher mental discipline, the adoption of more patient and complete methods of observation, and the adherence to a more rational induction, as to turn it steadily upward at the true meridian line, instead of allowing it to roll steadily on, until it again breaks upon the reefs and shoals of its own excesses. But we see no good reason for hoping for such a result. On the contrary, evidences of the same tendency to extremes and hasty generalizations are as visible in the field of practice to-day as at any former period. Very recently attention was directed anew to the importance of noting the variations of temperature in disease, and straightway there appear diagrams marking the variations of temperature in the progress of diseases with as much apparent fixedness and certainty as the thermometric lines are drawn over the topographical map of a continent, and the practitioner looks upon his pocket thermometer as his chief instrument in diagnosis and prognosis. That *temperature*, if studied in close, careful connection with the co-existing indications of the state of mutual disintegration and elimination, is of great importance in a chemical aspect, is certainly true. It was the subject of my inaugural thesis in January, 1837. It was again the subject of a careful series of investigations by me, more especially in its relations to certain kinds of food and drink, in 1850, the results of which were embodied in a paper read to this Association in May, 1851, and published in the *Northwestern Medical and Surgical Journal* for that year. Those investigations fully disclosed the important fact that the temperature of the body varied from one degree to two degrees Fahrenheit with each ordinary meal, invariably rising during the active period of digestion and then gradually declining until the next ingestion of food, thereby establishing precisely the same facts that were again proved experimentally by Dr. C. E. Buckingham, of Boston, as published in the Boston *Medical and Surgical Journal* for January 1st, 1874. It was in the same paper read to this Association in 1851 that the first direct experimental proof was given of the power of alcohol when in the human system to directly reduce its temperature. That the temperature of a body is altered by every change in the arrangement of its molecules, being increased as those become more compact or dense, and decreased as they are rarefied or rendered less dense, is a well-known law of physics. As a rule, those processes by which new material is digested, assimilated, and added to the tissues evolve caloric or heat, while those by which the cells and atoms of the tissues are redissolved and eliminated through the skin, lungs, and kidneys absorb or render the sensible heat latent, and therefore reduce the temperature.

When these adverse processes balance each other, the ordinary standard of temperature is maintained, subject to such daily variations as accompany the active stages of digestion. Thence it is plain that a given degree of temperature in any stage of disease is a simple physical fact, the correct interpretation of which will depend entirely on the careful noting of the coincident state of the processes of injection and elimination; just as the dulness elicited by percussion denotes the simple physical fact of increased density, while the question whether such density depends upon tubercular deposits, hepatization, or pleuritic effusion, will depend altogether upon the history of the case and the coincident facts. If we use our clinical thermometer for the same purpose that we use the instruments for percussion and auscultation, that is, for the establishment of a physical fact to be interpreted by a careful appreciation of preceding and accompanying phenomena, it will be of great value. But if we endeavor to make its markings into arbitrary rules to guide our practice, as has already been too hastily attempted, it will lead us into mischievous errors at every step. Another striking exemplification of the fact that our own day is as prolific of partial observations and hasty inferences as any that have gone by, is found in the application of the microscope to the study of etiology and pathology. Through its prolific revelations one army after another of poisonous germs are found preying upon the human race, until not only the air, earth, and water, but even the blood and the bowels, literally swarm with them. From syphilis to cholera and from throat disease to cancer we have little else than microscopic *germs* enumerated as essential causes of disease. Dr. A., in some part of Europe, announces that he has discovered in the dejections of cholera patients certain germs which, by diligent cultivation, multiply and develop rapidly, and a large part of the medical world at once leaps to the conclusion that these are the veritable causes of that dire disease; and instead of patiently extending observations to ascertain whether the same germs are not to be found in the serous discharges from mucous surfaces in any form of disease, after exposure to atmospheric air, they immediately give loose rein to imagination for the purpose of explaining how these extraordinary germs, hatched on the banks of the Ganges, could be propagated and distributed around the globe.

For this purpose they are made to travel with caravans, sail on ships, ride on railroads, and when there is neither caravan, ship, railroad, nor canal, they are made to percolate through the soil, receiving reinforcements now and then from some luckless wight perambulating the country with *cholerim*, and dropping his dejections just in the right place to supply the needed link in the chain of connection. But just as we have our maps lithographed, our literature filled with satisfactory explanations, and our warehouses filled with materials for disinfecting the dreaded dejections, the tantalizing word comes from a thousand sources that the supposed cholera germs are not by any means peculiar to the dejections from that disease, but may be readily cultivated as a post-partum growth in any serous evacuation from the alimentary canal. From the tenor of these observations let no one infer that I undervalue the microscope as an aid in the study or investigation of medical topics. Its use has literally opened to us a wide and most important field of knowledge, and when rightly used is capable of adding much more. My object is simply to attract your attention to what has appeared to me the strongest barriers in the way of genuine progress, both in the science and art of medicine, namely, incomplete observation of facts, deductions from inadequate premises, and the constant use of mere theoretical assumptions or suppositions as though they were demonstrated facts. It is the indulgence of these practices

that actually keeps one-half of the professional observers busy in correcting the errors and disproving the assumptions of the other half, and fills our literature with endless contradictions. Almost every problem connected with medicine is complex, requiring for its proper solution a careful observation of many elements, and their exact relations to each other. This is pre-eminently true of the problems involved in the study of etiology, or the causes of disease. To demonstrate the true relation of cause and effect in the origin and spread of diseases requires not only many observations concerning all the elements entering into the problem, but it requires these observations to be made coincidently in several distinct localities. And when the causation of epidemics is involved, the observations should have preceded for a considerable time the actual appearance of the disease, and be continued a like period after it has ceased to prevail. Indeed, if we would make genuine and reliable progress in the study of the causes and modes of propagation of diseases of every kind, we must no longer depend on chance observations, individual enterprises, or irregular and temporary expedients, but we must devise a complete and permanent plan or system of observation, covering the whole country, rendering available all the aid to be afforded by chemistry, microscopy, meteorology, and other branches of general physics, and pursue it with fidelity for a series of years. The appliances needed for such a work, even to the inclusion of atmospheric currents and terrestrial electricity, are available at the present day. What is needed is the wisely devised plan, the individual workers to man it, and the central executive person to maintain it in operation and cause the results to be annually gathered, carefully scrutinized, and communicated to the profession at large. And is not this national representative body exactly the central executive power that we need? Is not the Section on Practical Medicine, Materia Medica, and Physiology the place to devise the plan, to choose the workers, to designate the localities, and to annually gather in and digest the fruits? Many have asserted that the American Medical Association is a failure, and many are apparently looking anxiously for its early dissolution. But it has appeared to me that it has just reached the stage of development and the degree of perfection in its organization necessary for entering upon a career of prosperity and usefulness hitherto unknown in the history of scientific and professional organizations. With all ethical matters in the hands of a judicial council, with our strictly representative character improved, and the organizations of the sections more complete, we are really just prepared for efficient service in every department of the broad domain of medicine.

May we hope that during this session of the Association every member will attach himself permanently to some one of the sections, choosing the one embracing departments of study most congenial to his own tastes and opportunities, and that each section, in addition to the hearing of reports and volunteer papers and discussing them, will carefully plan definite methods for investigating some important topic connected with each branch of medicine assigned to it.

Such a course, pursued from year to year, would rapidly diffuse a more philosophical spirit of investigation, check excesses and hasty generalizations, foster co-operation, uniformity, and persistence in researches, and give to this Association such a character as would rally to its support the earnest workers in the profession from all parts of the country, thereby rendering its existence not only perpetual, but also ever increasingly useful to the profession it represents and to the great family of man.

SYPHILIS AND PROSTITUTION.

Dr. S. D. Gross, chairman of the Section on Surgery, next delivered an address upon the progress of surgery, in which he treated of the history and character of syphilis and its influence upon the public health. It was an elaborate and able attempt to prove the unity of the syphilitic poison and to establish its influence upon all the so-called hereditary diseases. The position taken was in many respects original and radical, and as a contribution to the discussion of the general subject was interesting and suggestive. The question of the control of prostitution was discussed, but without any definite conclusion as to the best course to be pursued.

Dr. J. Marion Sims, in rising to thank the author for this paper, expressed the opinion that the term, legalizing prostitution, was so obnoxious to the moral and religious sentiment of the community, that no attempt to have distinct laws passed, bearing upon the question, could ever be successful. He suggested that the only feasible plan was to place the matter in the hands of the health boards, who could have all the necessary power, and could exercise that power in a quiet and inoffensive manner to the end desired. Such health boards could be empowered to cause house visitation, and to force those infected with the disease to be sent to suitable hospitals, the same as in cases of small-pox and other contagious diseases.

It was suggested that a committee, with Dr. Gross as chairman, be appointed to carry out the objects of the paper.

The Association then adjourned until 9 A.M. the day following.

Third Day—Wednesday, June 6.

The Association met at nine o'clock. Dr. Grant, of Ottawa, Ont., and Dr. Murphy, of Chatham, Ont., were admitted as members by invitation. The arrangements for the return of the delegates to their homes by rail were announced.

REPORT ON THE PRESIDENT'S ADDRESS.

The Committee on the President's Address reported as follows, through Dr. White, of Buffalo, the chairman:

Your committee, to whom was referred the recommendations and suggestions contained in the President's Address, would respectfully report as follows:

We are fully in accord with the President concerning the propriety and desirability of establishing at some central position a physiological and pathological laboratory.

In view of the growing sense of the importance of carefully recorded facts and observations, we are fully impressed with the desirability of the publication of annual reports of the progress and discoveries of all chartered medical and sanitary institutions.

We also recognize the importance of concerted action on the part of the profession, and agree with the President in urging the formation of a complete system of State and local medical societies.

We would also recommend an extension of time of the session of one day, making the length of the session four days. This is done in view of the fact that, although the arrangement of the sections under the present circumstances is admirable, they occupy more than half of the time of the meeting, causing a lack of time for the proper and deliberate consideration of legisla-

tive matters. When, in connection with this, there is taken into consideration the fact that the over-generous hospitality of those who entertain the Association is apt to occupy much time, it will be seen that the time for the discussion of the papers is inadequate.

We also look with much favor upon the President's recommendation of the organization of an International Medical Congress, and would move the adoption of the following:

Resolved, That in view of the lack of time in which to properly transact the business of the Association, an extension of one day is deemed advisable.

Resolved, That the President appoint a committee of five, of which he shall be chairman, to elaborate a plan for the organization of an International Medical Congress, and report at the next meeting.

Your committee had also prepared a resolution in regard to memorializing Congress concerning the rank of the medical staff corps of the army, but find that they are anticipated by Dr. Keller. They would, therefore, simply recommend on the part of the members of this Association continuous personal application to the representatives in Congress from their several districts in regard to this important subject.

The report was accepted.

THE DEATH OF DR. HENRY MILLER, OF KENTUCKY.

DR. WHITE also offered a preamble and resolutions, written by Dr. Gross, in regard to the death of Henry Miller, of Kentucky, an ex-president of the Association, and made some remarks eulogistic of the character of the deceased. The resolution was adopted, and it was moved that Dr. White be appointed to draw up a memoir. Dr. White declined, and Drs. Gross, Keller, and Gaillard were appointed a committee on the subject.

MONUMENT TO DR. M'DOWELL.

DR. KELLER brought forward the subject of a monument to Dr. Ephraim McDowell, of Danville, Ky., the father of ovariotomy. He said that the Boyle County (Kentucky) Medical Society and the Kentucky State Medical Society had taken steps toward the erection of a monument to Dr. McDowell, and offered the following resolution:

WHEREAS, A most laudable effort has recently originated in the Boyle County Medical Society of the State of Kentucky, and in the Kentucky State Medical Society, to create a fund for the erecting of a statue, or some other suitable monument, in honor of Dr. Ephraim McDowell, the father of ovariotomy, English writers to the contrary notwithstanding, who lived in the town of Danville, in the State of Kentucky, and who performed in that town the first ovariotomy, in the year 1809;

Resolved, That the American Medical Association most earnestly endorse the action of said county and State societies, and as urgently commends the object to the generous consideration of the medical profession of the world.

Dr. Keller favored the resolution in a few words, and hoped for an expression in full on the subject.

DR. WHITE also favored the resolution, and it was adopted.

PAPER BY DR. PARVIN, OF INDIANAPOLIS.

DR. PARVIN, from the Section on Obstetrics and Diseases of Women, read a paper on Hemorrhage of the Uterus.

Thanks were tendered for the paper, which was referred to the Section on Obstetrics.

ABOUT DR. PALLEN'S PAPER.

DR. WHITE moved the suspension of the rules to allow Dr. Pallen's paper on Gynecology, which had been crowded out, to be read.

The chair (DR. TONER) ruled the motion out of order, as the paper had been referred to the Section on Obstetrics.

A gentleman appealed from the decision of the chair, but on its being stated that the paper had been referred to the Section on Obstetrics, and had not been reported back to the general session, the appeal was withdrawn and the regular order was proceeded with.

Dr. Talley, of the Section on Medical Jurisprudence, being absent, his paper was made a special order for this morning.

WASTE OF LIFE.

DR. A. N. BELL, of Brooklyn, chairman of the Section of State Medicine and Public Hygiene, read a report on the subject above indicated.

Dr. Bell's paper was accepted, and referred to his section. A vote of thanks was tendered for it.

REPORT OF THE DELEGATE TO EUROPE.

DR. ATKINSON read the report of Dr. Seguin, the delegate of the Association to European medical bodies, as follows:

Mr. President and Members of the American Medical Association:—You sent me as a delegate to the British Medical Association, and to other kindred European societies for the year 1873-74.

Ill-health did not permit me to attend other meetings than those of the British Association in London, and of the French Association for the Advancement of the Sciences in Lyons.

By both societies I was received for your sake as the most worthy among you could have been, and allowed the most cordial hearing.

I took this opportunity to advocate, with slight variations, in London and in Lyons, a theme of great importance. I mean the question of harmonizing our means of observation and of record, and of instructing therein mothers and nurses.

The British Medical Association ordered the printing of my lecture, and the Section of Medicine of the French Association for the Advancement of the Sciences voted the nomination of a commission to arrange the preliminaries of an international agreement on this subject. The motion was firmly supported by Prof. Verneuil, president of the Section of Medicine, and by Prof. Morey, of the College de France, and carried.

At this point I ask the concurrence of the American Medical Association, thinking that we must not now remain behind in a question in which we were ahead last year.

This question is of incalculable interest.

Our methods and instruments of observation are discordant in results and in scales; our clinical tables differ from nation to nation, from one hospital to another, and are almost ignored in private practice; family physicians are helpless to supply their share of the advancement of science, because they do not educate mothers to be their clinical assistants, and mothers and nurses remain a prey to the vilest quackeries because we do not teach them better.

As soon as the object of this communication shall be attained, the observations of physicians will become comparable at a glance, and their record be as positive as those of the operations of the chemist, the physicist, and the dynamist.

Moreover, women will be more useful when they form a higher estimate of their functions in the sick

chamber; and when they know that diseases are natural deviations from natural laws, they will cease to look for supernatural means of restoring natural health.

These considerations could be much enlarged. To save time I cut them short, and conclude by asking the American Medical Association to form an international commission of physicians of high standing, speaking the European languages, and designing to go to Europe this summer, to charge them to represent the American Medical Association before the British Medical Association, the German and French Association for the Advancement of Science, and other kindred societies; to promote interchange of ideas, and particularly to cooperate with them in any plan, scheme, or organization which would have for its direct object the uniform establishment and propagation of the methods and instruments of positive observation. And, finally, to invite them to report on the progress of this work at the next meeting of this Association.

The report was accepted and ordered printed in the minutes, and its recommendations adopted.

GENERAL BUSINESS.

DR. ATKINSON read a communication from the librarian of the Association at Washington. The report was received.

Dr. Atkinson also offered a resolution for the exchange of the published report of the transactions of the Association with other associations, the editors of medical journals, and the library of Congress. Carried.

DR. WOODWARD, from the Committee on Nomenclature, reported progress, and asked to be continued. Granted.

A RESOLUTION OF CENSURE.

DR. WILSON, of Michigan, offered the following preamble and resolution:

WHEREAS, Dr. Bartholow, of Cincinnati. O., in his zeal for scientific research, has recently made a series of experiments with electricity upon the brain of a patient, by inserting needles into the substance thereof, and passing currents from these to different parts of the body, causing thereby pain, convulsions, and probably hastening death; and,

WHEREAS, We are ever ready and willing to accord the greatest praise and honor to the original investigator in any part of the domain of medicine, yet these experiments are so in conflict with the spirit of the profession, and opposed to our feelings of humanity, that we cannot allow them to pass unnoticed.

Resolved, That in our opinion, no member of the medical profession is justified in experimenting upon his patient, except for the purpose and with the hope of saving said patient's life, or the life of a child *in utero*.

The resolution was referred to the Judicial Council without debate.

DR. MYERS EXONERATED.

DR. DAVIS stated that the matter referred to the Judicial Council in regard to Dr. William H. Myers, of Indiana, had been considered, and that the council decided that Dr. Myers was in good standing. Accepted and adopted.

A MEDAL FOR MEMBERS.

DR. ASKEW moved a resolution that a die suitable for a medal, with a likeness of Dr. Davis on one side, and the name and date of organization of the Association on the other, be struck, and furnished to members. Adopted; and Doctors Toner, Keller, and Woodward were appointed a committee to carry out the resolution.

MISCELLANEOUS.

DR. A. M. POLLOCK, of Pittsburg, moved the appointment of a committee of fifteen, to confer with the Philadelphia Society, in regard to the meeting in Philadelphia in 1876. Adopted.

The following committee were appointed under the resolution:

Drs. Pollock, Pittsburg; Altie, Lancaster; Green, Easton; Curwin, Harrisburg; Lyons, Williamsport; Gillitte, Franklin; Lee, Franklin; Hoeberstock, Pottsville; King, Pittsburg; John Lonman, Johnstown; Eugene Smith, Michigan; N. C. Husted, New York City; E. Lloyd Howard, Baltimore; J. H. Wheeler, Nashua, N. H.; L. F. Warner, Boston.

DR. BRODIE presented the plate on which was engraved the card of membership when the Association met in Detroit in 1856. It was accepted for the archives of the Association, and a vote of thanks was tendered to Dr. Brodie for it.

DR. DAVIS, by request, made some explanations in regard to the by-laws and the relation of the sections to the general session.

DR. BRODIE called on Hon. G. V. N. Lathrop for some remarks. He was greeted with applause, and made a brief response.

The Association then adjourned until nine A.M. Friday.

FOURTH DAY—FRIDAY, JUNE 5.

The Association was called to order at the appointed hour by DR. J. M. TONER, the President.

On motion, DR. EDWARD W. JENKS was added to the delegation to Foreign Societies.

DR. J. W. BENNETT, of Brookhaven, Miss., sent a communication containing medical reports from Canton, China, showing the progress of Western medicine in the East.

THE SALARY OF THE PERMANENT SECRETARY.

After some discussion the sum of $500 was appropriated as the salary of the Secretary for the year.

The following gentlemen were appointed a committee to digest a plan for an international medical association: Drs. J. M. Toner, N. S. Davis, Alfred Stillé, Austin Flint, J. S. Billings.

OFFICERS AND COMMITTEES.

The following officers were elected for the ensuing year:

President—Dr. W. K. Bowling, Tennessee.

Vice-Presidents—

1. Dr. William Brodie, of Michigan.
2. Dr. J. J. Woodward, of United States Army.
3. Dr. H. W. Brown, of Texas.
4. Dr. H. D. Didama, of New York.

Treasurer—Dr. Casper Wistar, of Pennsylvania.

Librarian—Dr. William Lee, of the District of Columbia.

Committee on Library—Dr. Johnson Elliott, of District of Columbia.

Assistant Secretary—Dr. Will. Walling, of Kertucky.

Committee of Arrangements—Drs. Edward Richardson, chairman; Lawrence Smith, Robert Gale, James Holland, Henry Bullitt, J. M. Keller, D. W. Yandell, Lewis Rogers, R. C. Hewett, all of Louisville.

Committee on Prize Essays—Drs. J. A. Octerlony, L. P. Yandell, J. D. Jackson, all of Kentucky; Theophilus Parvin, T. M. Stevens, both of Indiana.

Committee of Publication—Drs. F. G. Smith, Wm.

B. Atkinson, D. Murray Cheston, Casper Wistar, Alfred Stillé, all of Pennsylvania; William Lee, of District of Columbia; H. F. Askew, of Delaware.

The committee also report the following nominations for chairmen and secretaries of sections for 1865:

1. Practice of Medicine, Materia Medica and Physiology, Dr. Austin Flint, of New York, chairman, and Dr. J. K. Bartlett, of Wisconsin, secretary.

2. Obstetrics and Diseases of Women and Children, Dr. W. H. Byford, of Illinois, chairman, and Dr. S. C. Busey, of District of Columbia, secretary.

3. Surgery and Anatomy, Dr. E. M. Moore, of Rochester, New York, chairman, and Dr. T. S. Latimer, of Maryland, secretary.

4. Medical Jurisprudence, Chemistry and Psychology, Dr. Jerome Cochran, of Alabama, chairman, and Dr. G. A. Moses, of Missouri, secretary.

5. State Medicine and Public Hygiene, Dr. H. I. Bowditch, of Massachusetts, chairman, Dr. H. M. Baker, of Michigan, secretary.

Members of Section—Drs. J. Cochran, of Alabama; D. A. Linthicum, Arkansas; T. M. Logan, California; R. G. Buckingham, Colorado; B. H. Catlin, Connecticut; L. P. Bush, Delaware; F. Howard, District of Columbia; —— Nottingham, Macon, Georgia; H. A. Johnson, Illinois; W. H. Myers, Indiana; A. Y. Fields, Iowa; D. W. Stormont, Kansas; J. D. Jackson, Kentucky; S. M. Bemiss, Louisiana; S. Fitch, Maine; E. L. Howard, Maryland; H. I. Bowditch, Massachusetts; H. M. Baker, Michigan; A. B. Stuart, Minnesota; A. G. Smythe, Mississippi; D. F. Dean, Missouri; J. H. Peabody, New Hampshire; J. W. Parsons, New Hampshire; E. M. Hunt, New Jersey; A. N. Bell, New York; Wm. Clendenin, Ohio; H. Bettenger, Oregon; A. M. Pollock, Pennsylvania; E. M. Snow, Rhode Island; R. A. Kinlock, South Carolina; J. H. Van Deman, Tennessee; D. R. Wallace, Texas; J. L. Cabell, Virginia; A. T. Woodward, Vermont; H. P. Strong, Wisconsin; John Frissell, West Virginia.

Committee on Necrology—Drs. A. Sager, of Michigan, chairman; R. W. Hazlett, West Virginia; C. V. Mowtram, Kansas; John H. Collender, Nashville, Tennessee; D. V. Dean, Missouri; W. H. Cumming, Atlanta, Georgia; Alonzo Garcelon, Maine; J. H. Wheeler, New Hampshire; W. W. Mayo, Minnesota; W. M. Chambers, Illinois; G. Sutton, Indiana; B. A. Vaughan, Mississippi; Geo. Mitchell, Ohio; J. J. Woodward, United States Army; N. M. Dodson, Wisconsin; L. P. Yandell, sr., Kentucky.

Judicial Council—Dr. A. N. Talley, South Carolina, for two years; Drs. J. R. Bartlett, Wisconsin; R. H. Gale, Kentucky; J. B. Johnson, Missouri; J. R. Bronson, Massachusetts; B. W. Catlin, Connecticut; Franklin Staples, Minnesota; W. V. Briggs, Tennessee, in place of the seven whose terms expire at this meeting. The rest of the present council continued.

Special Committees.—Dr. H. R. Storer, chairman of a committee to report on American as compared with foreign winter cures, continued.

Dr. John Morris, of Baltimore, special committee on the use of pessaries.

Dr. John A. Octerlony, of Kentucky, special committee on cystic degeneration of the kidneys.

PLACE OF NEXT MEETING.

The names of the officers and committees were ordered to be printed in the published minutes. Louisville was fixed as the place for holding the next meeting, and the first Tuesday in May was selected as the time.

TREASURER'S REPORT, ETC.

The report of the Committee on Publication was read. The treasurer reported that the volume of transactions of last year was of much smaller size than formerly. A surplus of volumes remained, which he asked to be allowed to distribute. The balance on hand in the treasury was $1,938.48. The reports were accepted, adopted, and ordered entered on the minutes, with the exception of that portion relating to their resignations. Adopted.

RESIGNATIONS REFUSED.

DR. SMITH, chairman of the Committee on Publication, and Dr. Wistar, treasurer of the society, tendered their resignations, but the society declined to receive them, and they were continued in office for another year.

DEATH OF DR. MENDENHALL, OF OHIO.

It was announced that a telegram had been received that Dr. George Mendenhall, one of the former presidents of the society, died last night. The following gentlemen were appointed a committee to report at the next meeting concerning Dr. Mendenhall's death: Drs. Howard, Murphy, Richardson, Heighway, and Bartholow.

RESOLUTIONS OF THANKS.

DR. VAN DEMAN, of Chattanooga, Tenn., moved the adoption of the following resolutions:

"WHEREAS, In view of the fact that the American Medical Association is now about to adjourn, it is appropriate that they show some manifestations of their gratitude and thankfulness to this City of the Lakes for their kindness to said association, to the several railroads for the courtesies extended, and to the several officers and committees for their efficiency and untiring energy in making our stay profitable and pleasant among them; therefore

"*Resolved*, That our most profound esteem and grateful thanks are due, and are hereby extended to His Excellency Governor Bagley, His Honor Mayor Moffat, Mrs. David Thomson, Hon. James F. Joy and lady, Mrs. Wm. Pitts, Hon. E. A. Brush and lady, Hon. Philo Parsons and lady, Dr. and Mrs. Stewart, Dr. and Mrs. Brodie, and Mrs. Wm. B. Wesson, whose hospitable hearts have made us as welcome to their homes as the doors of their mansions have been opened wide; to the many citizens who have shown us so many kind attentions; to the several railroads for their courtesies extended to our members; to the medical brethren of Detroit, who have contributed so much to make our stay pleasant in their beautiful city, to the several members of the press of this city and their respective reporters, who for correctness of reports and faithful performance of their duties cannot be excelled anywhere; and last, though not least, our honored president, Dr. Toner; the efficient secretary, Dr. Atkinson; the several standing committees, and particularly the Committee of Arrangements, and their wide-awake chairman, Dr. Brodie, for their earnestness and familiarity with their respective duties, we recommend to future committees, and officers of like character.

"*Resolved, farther*, That we will ever hold in grateful remembrance our visit to Detroit; and may we in our future meetings, in whatever locality we may be called together, be as hospitably entertained and as well received, and carry home with us the feeling manifested at this meeting, that the *American* Medical Association knows no South, no North, East or West; all meeting under one flag, the banner of a *united* country, to do

battle against one common enemy, 'the ills that human flesh is heir to.'"

DR. DAVIS, in seconding the resolutions, said that he especially desired to praise the preparations made by the Committee of Arrangements for the proper transaction of business, in the selection of proper rooms for the meetings of the sections, and the announcement daily of the order of business.

MISCELLANEOUS.

DR. A. N. TALLEY, of South Carolina, was expected to read a paper at 10.30, but he announced that he had been unable to do so, owing to ill-health. He was permitted to send the paper to the Committee on Publication, or to prepare it in time for the next meeting of the Association.

DR. KELLER moved that Drs. S. D. Gross of Philadelphia, N. S. Davis of Chicago, J. M. Toner, Washington, J. Marion Sims, New York City, and John Morris of Maryland, be a committee to consider Dr. Gross's paper on syphilis, and report at the next meeting. Adopted.

MRS. ELIZA S. LEGGETT presented to the society a book written by her father more than a hundred years ago, and a pamphlet, showing that that gentleman was the first to introduce the doctrine of Jenner into this country, and also presented the lancet with which the vaccination was made. Accepted with thanks.

PAPER ON SURGERY.

It was announced by the President that a paper had been received from Dr. Paul F. Eve, of Nashville, Tenn., on surgery, "What the West has done for Surgery." It was referred to the Committee on Publication.

THE NOMINATING COMMITTEE.

A brief discussion took place concerning the work of the Nominating Committee. It was suggested that they should report before the last day of the meeting, so that the officers may be elected when the attendance is larger. DR. SIMS thought that the work of the committee was very large and important, and could hardly be commenced too early. It should also be finished early. DR. WOODWARD, U.S.A., thought that the committee were most competent to decide as to their times of meeting. They would doubtless transact their business as rapidly as possible. A motion to instruct the Nominating Committee in regard to this matter was laid upon the table, it being suggested that the attention of the Association had been called to the matter, and that this would probably prove sufficient.

OBJECTION TO DR. BARTHOLOW.

DR. HOWARD moved to substitute Dr. Carson for Dr. Bartholow, on the committee to prepare suitable resolutions on the death of Dr. Mendendall, stating that there were reasons which it was unnecessary to name for not placing the latter's name on the committee.

Several members objected, and a lively debate arose.

DR. KELLER moved that the committee be instructed to report this matter for publication in this year's volume of the transactions. Carried.

Dr. Howard's motion was then adopted, though a loud volume of "noes" was heard when the question was put.

THE CANADIANS.

DR. HALL, of Toronto, Canada, offered a resolution expressing the thanks of the Canadian delegates for the reception which had been tendered to them by the Association. He felt that himself and his associates had derived very great benefit from the meeting. They had become aware that medical science had advanced to a very high point in the United States, and the result of the meeting had been to increase the liberality of all the delegates, who had learned to respect each other, and to labor more mutually for the good of the profession. Dr. Hall expressed the good will which Canadians and Englishmen feel towards the Americans, and especially to men engaged in similar professions. He spoke very funnily of the peculiar differences between American and Canadian institutions, and of the different forms of government in Great Britain and the United States, alluding to the good-looking Queen who governs the former, and to the rather grim-looking soldier who rules over the latter. In conclusion, Dr. Hall trusted that they might next year see a large number of the members of the American Medical Association at the meeting of the Canadian Society.

DR. RICHARDSON, in seconding the resolution, said that he could not allow the opportunity to pass to express his thanks for the honors and courtesies he and his friends from Canada had received. He had not felt that he was a Canadian or a stranger. Both by members of the Association and by citizens of Detroit, they had been received with such friendliness that they felt that no words of appreciation could be extravagant.

DR. N. S. DAVIS, of Chicago, expressed the good feeling which the American members entertain towards their Canadian brethren. The friendly contact between the two would send the delegates to their homes, he said, with that magnetism which would do more good to their patients than they receive from pills and powders. He had himself been in attendance at the meeting of the Canadian Medical Association, and had received the kindest and most hospitable treatment. He rejoiced that the profession to which he belonged contained such ornaments to medical science as are now to be found in Great Britain, Canada, and the United States, and that the science has no boundaries save the desire to benefit the human race.

The resolution was adopted.

REPORTS FROM THE SECTIONS.

The minutes of the various sections were reported to the Association, and referred to the Committee on Publication.

A WELCOME TO LOUISVILLE.

A hearty invitation was extended by Dr. Richardson, of Louisville, to members of the American and Canadian Associations, to attend the next meeting at Louisville, where they would be greeted with a genuine Kentucky welcome.

THE ROLL CONFIRMED.

DR. BRODIE read the last names on the roll, and moved that the roll be confirmed. Adopted. The total number of members in attendance was announced at 427. [Applause.]

MISCELLANEOUS.

DR. O'NEILL moved that it be the duty of the permanent secretary to prepare at each meeting a list of the members and publish them early in the session, for the use of committees. Adopted.

DR. H. B. BAKER gave notice of an amendment to the constitution, that the officers of the several sections be elected by the sections themselves after the sections convene.

A resolution, of thanks to the janitor, pages, etc., was adopted.

DR. BRODIE, in behalf of the citizens of Detroit,

expressed the great pleasure and satisfaction which they felt in the meeting, and their hope that they might have the pleasure of meeting them again.

VALEDICTORY.

DR. TONER then delivered his valedictory as follows:

GENTLEMEN: Your labors are brought to a close, and we are about to adjourn the twenty-seventh meeting of the American Medical Association. Before putting the motion that shall at once terminate the session and my official relations to this body, permit me once more to thank you for the courteous and efficient manner in which you have supported and assisted me in conducting the business that brought us together, and congratulate you for the philosophic, thorough and intelligent manner in which you have viewed and discussed the different questions that have been presented before us.

I am quite sure that this meeting will be conspicuous in our annals, and long remembered by all who have participated in its profitable deliberations, and have partaken of the unbounded hospitalities of the people of Detroit. The character of the work done by us must serve to make this Association more extensively known throughout the world, and its purposes and aims better understood, both by the people and the profession of the United States.

I am confident we all feel more than rewarded for our attendance by the new ideas we have gained, and by the actual increase of our professional knowledge, and by the cementing of old friendships, and the formation of many new and agreeable acquaintances. The question now before us is that the American Medical Association adjourns to meet in Louisville, Ky., on the first Tuesday in May, 1875.

The Association then adjourned.

NOTE:—In the preparation of the foregoing report we are largely indebted to the Detroit *Free Press* and the Detroit *Tribune*, both of which papers contained very full synopses of the proceedings.—ED.

Progress of Medical Science.

COMPLETE ABSENCE OF THE UTERUS.—At a recent meeting of the Swedish Medical Society, Dr. Lamm narrated the following interesting case: A servant-girl, 25 years of age, consulted him for amenorrhœa. On bimanual examination through the vagina and rectum, no trace of a uterus or its rudiments could be found, but at about the normal level of the os there was a long, thin, firm band crossing the pelvis. There was a vagina, but instead of gradually enlarging as it ascended, it became smaller, somewhat like the finger of a glove; its length was about 9 centimetres. There were no rugæ, and the mucous surface was drier than usual. All the external genitals, together with the clitoris, were normal. The pelvis also was well formed, and the breasts and nipples were fully developed. Menstruation had, naturally, never taken place, nor had she experienced any of its molimina. Though she was subject to headaches, no periodicity was noticeable. Another strange feature of this case was, that the ovaries were found lying in the inguinal canals, and were about the size of plums. One could be replaced, the other could not. After hard labor the ovaries became swollen and painful; but these attacks did not seem to be in any way connected with the phenomena of menstruation.

INTESTINAL DUST.—At the last meeting of the Paris Academy of Medicine, Dr. Laboulebène, of Necker Hospital, made an interesting communication on the above. He stated that he had had the opportunity of observing six cases in which the patients, who generally fed almost exclusively on vegetables, evacuated with fæcal matter a fine broken dust, which cannot be mistaken for biliary gravel, or the crystals of ammonia or magnesia sometimes evacuated by typhoid patients, or the fæcal concretions found in the vermiform appendix. Chemical analysis of this dust had shown that it always contained a large proportion of silica. The presence of the dust thus introduced into the body had been the cause of gastralgia, constipation, and nervous phenomena, ending sometimes in hysteria and convulsions. Gentle purgations and animal food had put a stop to the disease.—*The Lancet.*

SUCCESSFUL LIGATION OF FEMORAL ARTERY AND VEIN.—Dr. E. P. Bennett, Danbury, Ct., writes: "Ligation of the femoral artery and vein having so generally been followed by gangrene, and consequent loss of life or limb, the following case may be of interest to the profession, and of vast importance to those who may be so unfortunate as to meet with an accident in which these vessels may be severed. A gentleman by the name of Olmstead, in the adjoining town of Redding, while engaged in skinning the head of a creature, was so unfortunate, in consequence of the slipping of the knife, as to completely sever the femoral artery and vein at about the middle of the thigh. A person with him at the time had the presence of mind to immediately cord the limb, so as to completely suppress the hemorrhage until I, with my son, arrived. I immediately cut down to the wounded vessels and put a ligature around both ends of the artery and vein. The wound was then dressed in the usual manner, and the limb was enveloped in a warm covering, and bottles of warm water applied to the limb, which soon regained its normal temperature, and the gentleman recovered without any further trouble. The ligatures from the vein came away in a few days and from the artery in the usual time. In the earlier part of my practice I was very cautious about ligating veins, for fear of phlebitis; but of late years I have often ligated veins, and thus far have never had any trouble from so doing."

LOCAL TREATMENT OF PULMONARY CAVITIES BY INJECTIONS THROUGH THE CHEST-WALL.—A noteworthy advance in the therapeutics of pulmonary diseases has been recently made in Philadelphia, by Professor Pepper. It has occurred to him, in view of the uniform failure attending the ordinary methods of treatment of pulmonary cavities in the stage of softening, that the morbid process might be more effectually combated by injecting powerful remedies directly into the diseased tissues through the chest-wall. He reports three cases in which this new procedure has been accomplished with perfect impunity, and in one of the cases with decided amelioration of the symptoms. In the first case reported there were manifest physical signs of a superficial cavity in the subclavicular space on the right side, containing some fluid. The operation is described as follows:

"On February 20th the No. 1 needle of Dieulafoy's aspirator, with the syringe attached, was introduced to the depth of about one inch in the second interspace on a line with the right nipple. He complained merely of a slight sensation of tingling and numbness, extending down the right arm. There was no cough

excited and not a drop of blood followed the puncture.

"February 24.—The same needle was introduced at the point of the original puncture to the depth of one and seven-eighths inch, and was followed by the escape into the vacuum of a few drops of offensive pus. The needle was very tightly bound by the tissues through which it passed, but some motion could be imparted to its free end, indicating that it was in a free space. Three or four minims of a mixture composed of liq. iodinii comp. gtt ij. to f. ʒ i. of tepid water were then injected through the canula by a hypodermic syringe.

"The operation was followed by loose, rattling cough, and the expectoration of about three fluid drachms of fresh, frothy blood. He was immediately put to bed, and the cough and hemorrhage soon stopped. His temperature in the evening and the following morning was only 99° F."

On February 28, six minims of iodine solution, of double the former strength, were injected at the same point and in the same manner.

On March 5, ten minims were injected at a point one-eighth of an inch nearer the sternum. March 8, it is recorded: "The patient is brighter and more cheerful than for months past. There is no hectic irritation, the temperature never rising above 99° or 99.8°. The pulse ranges about 84. His breathing is so much relieved that he has walked up three flights of stairs without much dyspnœa. The cough is but little troublesome and only a few white frothy sputa are raised. Auscultation shows that many of the râles formerly heard over the right apex have disappeared. There has also been some increase in flesh. All internal medication has been discontinued."

In the other two cases the method pursued was the same, but not continued sufficiently long to accomplish any decided result. In the second case the needle was introduced in the second intercostal space, on the left side, about one inch outside of the line of the left nipple. In the third case the point of insertion was one-half inch outside the line of the right nipple, in the second intercostal space.

Local anæsthesia by freezing was employed before puncturing. At the first puncture it is recommended to use the aspirator for the purpose of evacuating any fluid contained in the cavity. Afterwards a simple capillary canula may be used. As the puncture is made the patient is directed to take a full inspiration.

The only point claimed to have been gained by these experiments is "the possibility of puncturing superficial pulmonary cavities and injecting into them small quantities of dilute solution of iodine." The fact of such treatment being admissible suggests an innovation in the treatment not only of pulmonary *vomicæ;* but, as hinted by the writer, of superficial indurations or caseous infiltrations of the lung tissue; also, "of certain cases of severe hæmoptysis, especially when the hemorrhage proceeds from a well-defined seat of disease."

In an appended note reference is made to some reports of a recent paper in the *Berliner Klinische Wochenschrift*, by Prof. Mosler, on the "Local Treatment of Cavities in the Lung" by injecting certain remedies through the chest-wall, leaving the canula in. These reports were seen by Professor Pepper after his paper had been prepared. The coincident investigations of so eminent an authority as Prof. Mosler are a further evidence of the importance of the subject.—*Philadelphia Medical Times*, March 14, 1874.

LACTIC ACID.—In the *Pharmaceutische Centralhalle für Deutschland* for Nov. 20, 1873, is an article entitled, "Experiments concerning the Effects of Lactic Acid upon Animals, by C. Heitzmann." The article is as follows:—

"Lactic acid has been discovered in the urine of patients suffering from rickets and osteomalacia by Marchand, Ragsky, Lehmann, Simon and others. C. Schmidt demonstrated the same in the fluid from long bones in mollities, the bones having been metamorphosed into globular cysts. Interested in these statements Heitzmann instituted a series of experiments in the beginning of April, 1872, regarding the effect of lactic acid upon the bones of living animals, administered both internally and by subcutaneous injection. The animals selected were 5 dogs, 7 cats, 2 rabbits and 1 squirrel. As early as the second week of the experiments on dogs and cats, it was obvious that whether the medicine were injected subcutaneously or given by the mouth, while the supply of calcareous salts was diminished in consequence of the medicine, a swelling occurred at the extremity of the diaphyses of the long bones and at the junction of the ribs with the cartilages. This enlargement developed regularly until the fourth or fifth week and was immediately followed by curvatures of the extremities. Catarrhs of the conjunctival, bronchial, gastric and intestinal mucous membranes, with emaciation and spasms of the limbs, were accompanying phenomena.

Microscopical examination of the epiphyses showed a condition similar to that found in the epiphyses of rachitic children.

A continued administration of the acid was followed by diminished swelling of the epiphyses of the long bones, and the curvatures of the extremities were, to a certain degree, lessened. After a steady use of the acid for four or five months, however, there was a marked repetition of the catarrhal symptoms and softening of the long bones, which became flexible like willow-twigs.

A microscopical examination of the bones of those animals which had been using the lactic acid for from four to eleven months longer, gave an appearance similar to that found in the bones of those who have died of mollities.

No tumefaction of the epiphyses occurred in the three rodents. One died at three months and the other at five after commencement of the treatment, with symptoms of inanition. In the bones of these animals no marked indications of rachitis or mollities were visible. After eleven months of lactic acid treatment the squirrel is now drawing near his end.

These experiments demonstrate that by continued administration of lactic acid to carnivora, rachitis, primarily, and afterwards mollities ossium, may be artificially induced."

THE USE OF IODIC ACID BY HYPODERMIC INJECTION.—For some time the hypodermic syringe has been used to introduce fluids into the centre of glandular tumors. Lately Dr. Luton, of the Rheims School of Medicine, has drawn attention to the remarkable success he has had in the dispersion of glandular and other tumors by the use of iodic acid thus applied. Goitres have been so treated, the solution he uses being about one-fifth acid, the balance water. A sharp local action at once occurs, but he has seen no inconvenience follow, and the resolution of the tumor has finally been effected without suppuration.—*Med. Press and Circular.*

A TELL-TALE STRAW.—The *Medical Times* says:—"Among the prizes at a recent homœopathic Commencement was a hypodermic syringe."

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, June 15, 1874.

THE MEETING OF THE ASSOCIATION.

THE American Medical Association held its last Annual Meeting in Detroit. The proceedings of the same, which we present in full elsewhere in our columns, prove it to be a notable one in respect to many changes for the better which have been made in its organization. We venture to say that no more successful session has been held since the old-time period when the Association, as such, was looked upon with becoming and reverential awe by all those who sought an authoritative guide in medical propriety, and who realized the ultimatum of a decision on all matters connected with medical ethics. The changes which have been wrought for the better have been in the main those which have been so repeatedly insisted upon in these columns. It is not our purpose to claim any credit for originality; in fact it would be hard to make such a claim, in view of a plan which would naturally suggest itself to any one who had studied the subject with any attention whatsoever. The main cause for congratulation with ourselves is, that we were evidently on the right side, all doubts to the contrary being set aside by the remarkably smooth working of the new plan. If any one had any doubts as to the practical working of a judicial council, they have but to review the proceedings of the organization from the first day to the last, to notice the absence of all the usual quarrels that were heretofore so rife in open session, and to appreciate the readiness with which the Association accepted the decisions of said council as final. It is certainly saying a good deal on the first trial of its work, that no complaint was entered against the council by any one, and the promise for the future is certainly proportionately encouraging as its machinery becomes the more perfectly understood.

To such as have been acquainted with the difficulties attending the discussion of vexed questions in ethics in former times, the impossibility on many occasions of referring the matters in dispute to a competent tribunal, it was refreshing to see how unnecessary debate was at once checked by a prompt reference to the council. In fact, if the duties and powers of the council are properly understood and appreciated, it will be next to impossible in future to disturb the harmony of the meeting, or detract from its dignity as the representative medical association of the country. The strictly executive business is now wholly confined to the council; matters of general interest are taken care of in the morning sessions, while the strictly scientific element is developed by the various sections.

In regard to the new arrangement for the meetings of the sections, we are warranted from the experience of the last session of the Association in saying that the said changes were for the better. In the practical working of the plan, however, there was more difficulty than in that of the council, or in that of the morning session. As a beginning, however, the results were as good as could have been anticipated. The material was abundant, but the trouble was there was not enough care taken in selecting the proper papers before their presentation. In the main the subjects presented were of practical interest, but the cases which were an exception to this were not so few as we should like to have seen. If the chairmen of the different sections, who were representative men in their departments, had taken the pains to look over the papers, and with the sanction of a sub-committee accepted or rejected the same, the sections would not have been compelled to stultify themselves by receiving papers, much less wasting valuable time in listening to them. In one or two instances the sections could not recommend these papers for the transactions, simply because it was perfectly apparent that the said papers were unworthy. The only way out of the dilemma that was at all promising was the reference of the papers to the medical journals. We are not so badly disposed towards our fellow-men as to think this action was a reflection upon medical journalism, and so we view it in the light of a grim joke. Some of these papers may be published. If they are, however, we will pity the authors, and will sympathize with the journals for their scarcity of good "copy." Whenever a section, actuated by every principle of ordinary courtesy towards an author, is willing to strain a point to be obliging and conciliating, and so plainly dodges the question of a recommendation of a paper, as was apparent in more than one instance, the case is a hard one for the section, and is perhaps a little disagreeable to the author—at least to one who is at all impressible. All these little difficulties could be obviated by a little care on the part of the chairmen of the sections in soliciting papers in the first place from responsible gentlemen, men who have a reputation to keep, and in asking contributions from such as they know are able to make a reputation. Even such a course would not

be absolutely trustworthy until the papers offered were submitted to a competent sub-committee for their impartial judgment. As a rule all the papers to be presented, or at least the majority of them, could be examined before the meeting, in fact, engaged months beforehand. If this could be accomplished, and we see no practical objection to it, it would prevent would-be writers from springing their productions upon sections, and gaining more of a hearing before them than they could obtain even from their personal friends at home.

Another plan to obtain good papers would be to have them recommended by the societies at home. If this were the case, we could have promised beforehand that at least one paper from New York would not have been presented *in extenso* before any section.

The question of delegateship was settled in a very satisfactory manner by the passage of the amendment proposed last year. Now we have the whole matter in a nutshell. The delegates are chosen from every society recognized by the respective State Societies, with the proviso that such representation does not exceed ten per cent. of all the residents in a given district. All institutions are very properly ruled out. This is a measure which we have advocated for years past, and it is becoming for us to endorse it *in toto*.

Laying aside the exceptions already mentioned, the papers presented to the sections were exceptionally good, and the discussions were carried on in a becoming spirit. The social element was a success, largely due to Dr. Wm. Brodie, of Detroit, whose personal efforts in this direction called forth the thanks of all present.

The address of the President, Dr. J. M. Toner, of Washington, was a model in its way, reviewing the progress of medicine in this country, and offering such suggestions for the improvement of American medicine as his extensive knowledge of its resources entitle him to offer. The determination to make the meeting a success in every way was equalled by his capacity and resources. The next meeting will be held in Louisville, Ky., and should be very largely attended.

Reviews and Notices of Books.

A Clinical History of the Medical and Surgical Diseases of Women. By Robert Barnes, M.D., London. With one hundred and sixty-nine illustrations. Philadelphia: Henry C. Lea. 1874. 8vo, pp. 791.

It is difficult to understand the *raison d'être* of another work on the Diseases of Women, in view of the many excellent treatises which have been written during the past ten years. Yet we think Dr. Barnes's book will take and maintain a popular position along with its elder compeers. The title is a happy one in so far as an attempt is made to differentiate it from other recent books on the subject; but as really a distinctive feature, and indicating the mere character of the volume, or as containing more case histories than its fellows, it is misleading. The work is strictly clinical only so far as it may embody the results of a large experience, and not one whit more so than Thomas's and other practical works on the same subject: it is constructed on the same principles as these, and with no better claim for a clinical basis. The pathological portions are particularly valuable, "the rich mines of pathological material in the museums in the College of Surgeons and of the London hospitals" having been explored. Full and fair expositions of the various opinions held on many unsettled subjects in gynæcology are given, and here, as indeed throughout the book, familiarity with the whole literature of this department of medicine is shown. Dr. Barnes is not only a practitioner of exceptionably large opportunities which he has used well, but he has kept himself informed of what has been said and done by others, and he has in the present volume judiciously used this knowledge. Experience and good sense have led him to generally moderate views in therapeutic procedures, and we do not find his teachings in the direction of rash or extravagant surgical interference, which has been the characteristic of a certain school of gynæcologists, and which, we believe, has been more destructive of life than is generally admitted, and has certainly entailed long, and often permanent, ill-health on its victims.

The arrangement of the book is good. There are several excellent diagnostic chapters, which we would particularly recommend to the student and practitioner, as those on the significance "Of Leucorrhœa," "Of Hemorrhagic Discharges," "Of Dyspareunia, including Vaginismus," "Of Sterility," etc. These are truly treated of clinically. The chapters on displacements of the uterus are among the best in the volume, and to our mind very sound. We give the following quotation, with regard to the true *modus operandi* of the Hodge pessary, which is too little understood by practitioners, and leads to many failures which would be avoided if its true theory of action were more generally appreciated:

"The Hodge or lever pessary answers most of the indications with the least amount of drawbacks. It is of essential importance to bear in mind what is too often forgotten, namely, that it is a lever. A lever must be freely movable. The lever-pessary, to act properly and safely, must float in the pelvis. It is simply held in the vagina. It should not take any bearing upon the walls of the pelvis; to make it do so would be to degrade it to the level of the old ring-pessaries, and to sacrifice its principle of action. This is what happens if too large an instrument is used. Then the vagina will be put on the stretch, its elasticity will be impaired, leverage lost, and the pessary pressing unduly may cause inflammation and ulceration" (p. 567).

Dr. Barnes thinks that chronic metritis may be followed by substantial, if not complete recovery. He says:

"Appealing to the same evidence which proves the cure of acute metritis, we cannot absolutely deny the curability of chronic metritis. Pregnancy is, if I may trust my own observation, not infrequent. It sometimes takes place, no doubt, whilst the uterus is still in an imperfectly restored condition. But the value of this test of return to functional work is strong. . . . . Now it, as Scanzoni himself asserts, there is no such thing as chronic metritis absolutely limited to one part of the organ, of course when we have hypertrophic induration of the cervix, about which there can be no doubt, before us, we must infer that the body of the uterus is similarly affected. Now it is a fact beyond dispute that pregnancy is not uncommon in cases of very advanced,

even extreme, hypertrophic elongation of the cervix. I have notes of many such cases. We are driven, then, to conclude that the hypertrophy resulting from chronic metritis may either be so far cured that the uterus can resume its highest function, or that the persistence of the hypertrophic change is not an absolute bar to this resumption of function. Practically, whichever alternative we adopt there is a cure. . . . I think, then, we may conclude that the uterus hypertrophied under chronic metritis may be restored, at least sufficiently for the resumption of its duty. If the morbid hypertrophic matter can be removed by gestation, why not by other means. . . . If we can establish a reasonable presumption that the condition is curable by any means, surely we need not despair of finding other means that may accomplish the same end" (pp. 445–6).

We can strongly recommend Dr. Barnes's work to the gynæcological student and practitioner.

A PRACTICAL TREATISE ON THE DISEASES OF CHILDREN. By J. FORSYTH MEIGS, M.D., and WILLIAM PEPPER, M.D. Fifth edition, revised and enlarged. Philadelphia: Lindsay & Blakiston, 1874. 8vo, pp. 1,008.

THE modest duodecimo volume of some 300 pages, published in 1848, has in successive editions been gradually enlarged until, in the present edition (the fifth), it has become a portly octavo of over 1,000 pages. It is now one of the completest and most trustworthy treatises on the diseases of children in any language. The fifth edition has been subjected to careful revision; several important articles have been rewritten, and many new ones have been added, as those on Pulmonary Emphysema, Pneumothorax, Affections of the Tonsils, Retro-pharyngeal Abscess, Malarial Fevers, and Scrofula. Besides giving the large experience of its authors, it manifests a full knowledge of what has been most recently done in the department of diseases of children, both in this country and elsewhere; and in this part of their task the authors have shown fairness and judgment. The practical aim of the book has been generally well sustained; and whilst the essentials of etiology, pathology, and morbid anatomy have not been overlooked, adequate space has been given to the discussion of the treatment of the different diseases, which, as a rule, has been ably, and, as we think, happily indicated.

Cholera infantum is still retained in the section on "Diseases of the Stomach and Intestines," which we regard as leading to a wrong notion of its pathogeny, and tending to strengthen the false theory of its being a local and not a general disease; and though what is said of its causes and pathology would indicate that the authors do not wholly share this error, still we think they fall into as grave a mistake in taking a much too limited view of the morbid nature of this affection, if one not altogether wrong. The conditions under which cholera infantum occurs, and the symptoms of the chronic and more common form of the disease, show a much closer pathogenetic relation to camp diarrhœa than to malignant cholera. Whatever may be the causal factors, they produce the same result, and the disorder becomes essentially one of malnutrition; and upon the recognition of this view depends, we believe, the success of treatment. Our authors, looking upon it as essentially a choleraic disorder, naturally fail, if our notion is a correct one, in giving suitable prominence to the most important therapeutical indications.

Chapter IV., on Diseases of the Nervous System, is remarkably complete, and generally on a level with our advancing knowledge of this class of disorders.

The rapid sale of the last editions of this work, since the valuable collaboration of Dr. Pepper has been secured, shows the estimation in which it is held by the profession.

Correspondence.

THE MEETING AT DETROIT.

[SPECIAL CORRESPONDENCE.]

DETROIT, June 4, 1874.

So much will probably be said of the scientific part of the meeting of the Association that we have been tempted to say a word or two upon the social element. In the first place the attendance was unprecedentedly large. Dr. Brodie informed us that there were 427 delegates present by actual count. When it is considered that each delegate pays five dollars for the honor, we think we can calculate that the *Transactions* of the Association have a fair share of appearing "on time."

On looking over one of the morning papers, which by the way gave very full reports of the proceedings, we learned that a number of noted medical men were present. This notice was hardly orthodox, as it is well known how disagreeable it is for modest medical men to be paraded before the public as "distinguished and successful" practitioners. The fact is it is undignified to allow it, is in direct violation of the Code, and more, it is none of the business of the public. We are all successful practitioners, only you and I are better than others. But what is the use of invidious distinction when the papers say that we are all equally distinguished and successful? In what we have to say we shall stick to facts, and if they prove suggestive to others, we leave to them the responsibility of working them up.

The medical men in Detroit were pleased to see so many really distinguished medical men. When we say this much we speak with authority, and not as the scribes (reporters).

Dr. Brodie, the chairman of the committee of arrangements, was particularly pleased to see that the meeting was a success. He worked hard enough for it, however. He was hither and thither and everywhere, and appeared to be anxious to get at some other place in the mean time. We hope the unpoetical comparison will be forgiven, but he reminded us of a pea on a hot shovel bobbing here and there without being able to get hot enough. The worst of it was he kept every body hot about him. There was no end to entertainments: five or six receptions were crowded into one evening, setting aside lawn parties, boating excursions, parades, and exhibitions of the injection properties of the fire engines (very suggestive to spray producers). As to the victualling part of the entertainments there was just the same fault to be found. If there could be said to be such a possibility as having too much of strawberries and cream, chicken salad and coffee, we would mildly suggest that the possibility was very nearly approached. We believe that the question at these entertainments was, whether strawberries were made for man, or man made for strawberries, and we know that a good many had to give up the conundrum. We were forced to go with the majority, who

were in favor of man as an enveloping rather than a developing being.

A noticeable feature in these entertainments was the absence of spirituous liquors, a custom which deserves commendation, despite the radicalism of one of the members of the Association, who believes alcohol was created for no purpose whatsoever. There was no vote taken on this question, as nothing was opened for discussion. We should like to have heard the views of the gentleman who read that paper on hydrophobia before one of the sections.

There was a good deal of talk in regard to the Presidency, and from the first it was understood that the "coming man" should be a New Yorker. Drs. Savre, of New York, Moore, of Rochester, and White, of Buffalo, were named, but there was such a want of settlement, such a lack of agreement as to the individual man who should be pressed, by the New York delegation, that the whole affair fell through, and the successful candidate was chosen from Nashville. New York will have it next time—so say the knowing ones. The election of Woodward, of the army, was considered to be a deserved compliment to his corps. Speaking of the army, we hope that the modesty of Dr. Billings, of Washington, will not be outraged by a reference to his presence at the meeting. If we had to count up the number of gentlemen who were introduced to him we should have to give it up; and if we were to ask him how many of these gentlemen, among other trivial matters, asked him about the spare copies of the Medical and Surgical History of the Rebellion, we imagine he would have to give it up also. We are frank to confess that we were one of the number to ask him, not for ourselves alone, but for "our suffering fellow-men," for the "good of the profession," "good of the army," and other likely reasons, when he informed us that there were some spare copies, but only for such as had desirable books for exchange. The time for getting these histories of the war, for nothing, seems to have passed.

We saw many gentlemen from New York at the Russel House, which might be considered the headquarters.

Primus inter pares was Dr. J. Marion Sims. He still bears a rather youthful appearance, and while he is as enthusiastic on his specialty as ever, he has the same modesty concerning his real merits as he had when he made his first successful operation for vesico-vaginal fistula. We heard him describe it for the first time in New York, and we can speak with authority. He was chosen a member of the Nominating Committee from New York. Dr. Sayre is always at a meeting of the Association. He came up with a paper on fractures, and maintained, among other things, that it was possible to make union of a fracture of the thigh perfect. And like him, when once he said it, he stuck to it, the Surgical Section to the contrary notwithstanding. Foster Jenkins, of Yonkers, was also there, mostly as a looker on; but he being a book-worm, and having quite a collection of rarities in his library, was quite interested in Billings' account of the Surgeon-General's library. We have no doubt that there will be some exchanging going on. We hardly believe that he has a Medical History of the Rebellion, as yet. Dr. Garrish, of New York, was also present, and had a paper on hydrophobia—a subject to which he has given his special attention. If we had the newspaper at hand in which his remarks were printed at length, we would quote. Dr. Bulkley, the rising dermatologist, was present with two papers. Dr. Brodie introduced him, on one occasion, as a "scaly" doctor. We imagine he must have had in mind his capacity for weighing things properly. If so the pun was tolerable.

Dr. White, of Buffalo, took part in the discussions, and maintained his reputation as an easy speaker, as did also Dr. Moore, of Rochester, who was often seen in earnest conversation with his colleagues on a subject which is now interesting him very much—that of fractures. Dr. Parvin, of Indiana, had an instrument for exsection of uterine fibroids, which he exhibited to his section, and afterwards explained in detail to some friends. It is an ingenious affair.

Speaking of new instruments, a great deal of humor centred around the description of one by a delegate. He was too modest to make his remarks in open session, and was only forced to explain by the importunity of friends. He styled the instrument the Compound Back-action-Auro-recto-Micro-spectroscopic Speculum, and insisted that by its use a diagnosis of piles, ulcer of stomach, and congestion of the brain could be made out in one sitting or lying, as the case might be. He had a sketch of the instrument, showing the passage of light from the aural to the anal speculum, but he experienced a great deal of difficulty in making his hearers understand how the light could be made to penetrate the brain of an ordinary patient, and how, in case the colon became impacted, the beam of light could be made to reach the diaphragm without refraction. The different explanations offered, and the number of suggestions made to improve the instrument, were, from the nature of the subject, and the end claimed, an unfailing source of pseudo-scientific amusement. The exhibition of the drawing and the description were as entertaining as the affair was novel. The more there were to listen to the description the merrier it became, and each went away vowing to improve upon the grand principle. The fundamental difficulty, however, was, that no one understood the real use of the instrument except the inventor.

Dr. Dunglison, of Philadelphia, was also present as a delegate, and a boarder at the Russel House. As all are aware, he is the rising medical lexicographer, the able editor and reviser of the *Medical Dictionary*. If he were asked how to get a dictionary, and in the same way as Billings is asked to get the History of the Rebellion, he deserves to be pitied. We mean to say in the way of a hint for a presentation copy. Dr. Dunglison came to the Association in quite an important function, as correspondent of the *Med. Times and Gazette* of London. When we were informed of it we almost wished we were on patronizing terms with him, in the hope that he might mention our name among the distinguished ones present.

Dr. Gross, of Philadelphia, read a very important paper on syphilis, and we think that the ground taken, that the disease was the *fons et origo* of everything else, was novel enough to claim attention. Very few agreed with him on that point, but he can afford to stand alone, for a while at least. Dr. Davis, of Chicago, was there, and why not? It has been said that he runs the machine of the Association. The fact is, he can't help it, because the majority have a fashion of following him in any important move. Who is to blame?

The President, Dr. Toner, was a universal favorite. We expected to see a statist as venerable in years as in experience; but one finds it difficult to reconcile his well-preserved appearance and genial manner with that of an incorrigible book-worm, who has his house in Washington packed in every conceivable corner with books. One reason, perhaps, for this promiscuous distribution of books is that he is still a bachelor. But we are drifting too much towards mere gossip, and must close.

* * *

SEPTICÆMIA BY AUTO-INFECTION.

To the Editor of The Medical Record.

Sir:—I have been tempted to send you a report of the following case by reading Prof. Barker's article on "Puerperal Septicæmia and Pyæmia." I regret exceedingly that I have kept no accurate report of the case; but, imperfect as it may be, I think it will be extremely interesting, and may assist in arriving at the proper pathology of certain cases of septicæmia by auto-infection.

Samuel C——, a medical student of mine, aged 20, of stout and robust frame, with no hereditary predisposition, was taken sick about the 24th of September, 1873, with typhoid fever, modified, or rather complicated, with malarial features. About the twelfth day of the disease he had a most alarming intestinal hemorrhage, which was entirely controlled by fl. ext. ergot in drachm doses. From this time until about the 12th day of October his convalescence was more rapid than is usually the case. Diarrhœa had ceased, tongue natural, no tympanites, pulse normal, and temperature 99°. I had intended not to visit him after the next day. In the night, however, I was called to see him at 11 o'clock, to relieve a violent pain in the calf of the left leg. I ordered an anodyne liniment, and the leg enveloped in hot flannels. I saw him again at 5 A.M., and discovered phlegmasia alba dolens, apparently caused by clot between the saphenous opening and the common iliac vein. The veins up to the saphenous opening were corded and painful; the leg enlarged about two inches in circumference, and exquisitely painful when the leg was moved by himself. Under the influence of quinine, potass. chlorat., and tr. ferri chloridi, he gradually improved for two or three days. During this time he seemed to be doing remarkably well, except the suffering with his leg. The temperature at no time exceeded 101°, and his other symptoms natural. Rather suddenly his whole condition changed for the worse; and, judging from the symptoms, we (I was assisted in the case by Asst.-Surg. P. Middleton, U.S.A.) thought he had a relapse of the enteric fever. His condition was decidedly typhoid; a profuse diarrhœa, fearfully offensive; wasting perspirations, tympanites, low delirium, etc. We began then to fear septicæmia. Up to this time the thermometer had not aided us, as the range in relapsing typhoid and septicæmia is almost identical. We did not fully satisfy ourselves until the temperature was 106¼°, and then we knew that we had a case of septicæmia. The treatment had been quinia, averaging 30 grs. per day, mur. tr. ferri., potass. chloratis, and from 8 to 16 ozs. whiskey. All through the attack beef-tea, milk-punch—in fact the most nutritious diet. Three days before he died he raised himself in bed and became livid—was almost fatally asphyxiated by a clot passing through the heart, which eventually became a pulmonary embolus. He from this time rapidly sank, and died on October 30th.

The conclusions I draw from this case are the following: Here was a stout, healthy man reduced by enteric fever and profuse intestinal hemorrhages; his blood in a state of hyperinosis, which resulted in a venous thrombosis from inopexia. There is no doubt in my mind that the fever and the hemorrhage were the sole agents which brought about this state. Trousseau, in his article on "Dothinenteria," mentions such a case in a niece of his. Now, there are three terminations of a venous thrombosis: 1st, Fatty metamorphosis, and subsequent absorption of the clot, accompanied by recovery; 2d, the clot may become detached, and cause death by asphyxia, or the consequences of pulmonary embolism; and, 3d, by disintegration of the clot, producing a septic poison, and, of course, septicæmia.

In my patient's case absorption had partly taken place, as was proved by the diminution in the size of the leg, and the corded and knotty condition of the veins. There is no doubt but that he was nearly asphyxiated by a clot passing through the heart, and becoming a pulmonary embolus. The sad sequel certainly proves a septic poison from disintegration of a clot, which is to me conclusive evidence of a case of septicæmia by auto-infection without phlebitis. No autopsy.

W. B. Rodman, M.D.

Frankfort, Ky., May 22, 1874.

DISLOCATION OF HIP IN A WOMAN SEVENTY-THREE YEARS OF AGE.

To the Editor of The Medical Record.

This letter contains a record of a case of very great interest, a dislocation of the leg in a woman 73 years old. Except the case reported by Gauthier (88 years), this is, so far as I know, the oldest person in whom the accident has occurred.

Yours truly,

Frank H. Hamilton.

Sir:—Sarah Hamilton, æt. 86, widow, white, American. For a number of years she had been living alone in a small house in the village of South Salem, Ohio. Having fallen while in the act of walking across her room-floor, and finding herself unable to arise, her outcries brought in her neighbor. I was called immediately to see her (morning of December 8, 1872), and on entering the room I found her in the sitting posture, her left leg extended, while her right leg was flexed upon the thigh, and at the same time thrust under the popliteal space of the opposite fellow. Knowing her advanced years, and the slightness of the cause for present injury, intercapsular fracture of the neck of femur flashed across my mind. Wishing to avoid, as far as possible, further injury to soft parts at seat of fracture, I put her injured limb in a more favorable position before moving her. Judge of my surprise, upon putting my hand under lower third of femur, to feel distinct crepitation there. Now I resigned myself to a case of multiple fracture. But in this I was happily disappointed, for upon *careful* examination, after putting her in bed, I found the fracture just above the condyles of the femur the *only one*. Put her limb in almost the straight position, laying it on a well-padded double inclined plane, raised enough merely to fit popliteal space; short splints at point of fracture, fearing to use a perineal band, on account of thinness and age of subject; made extension with four-pound weight and pulley; counter-extension by weight of body. At end of fourth week union had made considerable progress. On the sixtieth day I removed the splints, and found firm union. No excoriation about the limb or body. Still fearing an accident, I retained the weight and short splints a week longer. During the treatment of this case I called in my friend W. H. Willson, M.D., of Greenfield, Ohio, who examined the fracture before bony consolidation took place. While I was examining for intercapsular fracture, I found the head of the femur of this right limb resting on the body of the pubes, pushed far up toward anterior inferior spinous process of right ilium.

She now told me that thirteen years previous she had fallen down a flight of steps about three feet

high, and the result was a luxation of the head of the bone. No attempt at reduction had been made, her medical attendants being uncertain at the time of the nature of the injury. "Often," she said, "I would push that lump down in my groin, and it would move my whole leg." For the years that I had known her she always walked with her right foot so strongly everted that it formed a right angle with the left; and I often wished to examine into the nature of the injury, but never had an opportunity until now. She was unable to walk for six months after she suffered the dislocation.

On March 28th, 1874, Dr. W. H. Willson and myself again met and re-examined this patient very carefully. Though in her eighty-eighth (88) year, we found her health good and disposition cheerful. By a most rigid physical examination we satisfied ourselves beyond a doubt that an ancient luxation existed here, with head of femur on body of pubes, resting near the anterior inferior spinous process of right ilium.

We also made the following measurements:—Right limb, injured: from anterior superior spinous process to external malleolus, 30 inches; left limb, sound: between same points, 31¼ inches. Shortening of right femur, as near as could be ascertained by measuring from top of greater trochanter to external condyle, as compared with opposite fellow, ¼ inch; the dislocation occurring in her seventy-third year.

Respectfully submitting the above report, we remain

Your obedient servants,

P. J. KLINE M.D.,
Portsmouth, Ohio.
W. H. WILLSON, M.D.,
Greenfield, Highland Co., Ohio.

To Prof. F. H. Hamilton, N. Y. City.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from May 19, 1874, *to June* 4, 1874.

Surgeon JNO. MOORE, and Assistant Surgeons J. J. WOODWARD and J. S. BILLINGS.—Directed to attend the annual meeting of the American Medical Association, and on its adjournment to return to their proper stations. S. O. 118, A. G. O., May 28, 1874.

BILL, J. H., Surgeon.—Assigned to duty as Post Surgeon at Fort Wood, N. Y. H. S. O. 94, Mil. Div. of the Atlantic, May 9, 1874.

FRYER, B. E., Surgeon.—Assigned to duty at Fort Wadsworth, N. Y. H. S. O. 94, c. s., Mil. Div. of the Atlantic.

FILTON, H. R., Assistant Surgeon.—Assigned to duty at Fort Sully, Dakota Territory. S. O. 94, Department of Dakota, May 12, 1874.

MIDDLETON, P., Assistant Surgeon.—Assigned to duty at Fort Duncan, Texas. S. O. 72, Department of Texas, May 12, 1874.

STEINMETZ, WM. R., Assistant Surgeon.—Granted leave of absence for three months. S. O. 120, A. G. O., June 1, 1874.

CORRECTIONS.—In the last No. of THE MEDICAL RECORD (June 1), we inadvertently stated, in a paragraph on page 304, bearing the caption of "Collegiate Appointments and Resignations," that Prof. Edmund R. Peaslee had "been elected to deliver the course of lectures on Diseases of Women at the next session of the Bellevue Hospital Medical College." We ought to have said that Dr. Peaslee had been regularly appointed Professor of Gynæcology, in said College. Under the same caption we also stated that "Dr. Stephen Smith had been appointed Professor of Surgery in the Medical Department of the University of the City of New York." We should have said that Dr. Smith had been appointed "Professor of Clinical Surgery and Surgical Jurisprudence." Dr. Alfred C. Post is Professor of Surgery in the Medical Department of that University.

Medical Items and News.

POISONING BY HYDROCYANIC ACID.—The extent to which cyanide of potassium is used in the various arts makes it important that those who use it should be acquainted with some of the dangers to which they are exposed. A French photographer, Bourdon, was recently taking some scenes at Fontainebleau. Working in the laboratory one morning, his fingers became blackened by nitrate of silver, and he attempted to remove the stains by rubbing them with a piece of the cyanide of potassium. In doing so a small piece became impacted under his nail, and came in contact with a small excoriation. Severe pain ensued, and then an attack of vertigo. Thinking that vinegar might give him relief, he poured some over the wound. The result, however, was most disastrous, for the cyanide was immediately decomposed, and free cyanic acid was liberated. The vertigo increased to an alarming degree, and was accompanied by rigors and lividity of the face. Unfortunately he was alone and could not communicate with his friends, so that he remained in this condition a number of hours, entirely unable to move or speak. Medical advice was obtained, and he rallied sufficiently to give some account of his singular attack, but the poisonous action of the acid had already progressed too far, and he died on the following night.—*Gaz. delle Clin.*, April, 1874.

CHLORAL POISONING CURED BY STRYCHNIA.—A man who had taken an overdose of the hydrate of chloral, for the purpose of self-destruction, was recently taken into a hospital in Berlin. The amount of the poison was 34 grammes, or about 370 grains. He lay in a heavy sleep, respiring deeply, with congested face, and a pulse of 100. As there were no symptoms that were regarded as immediately threatening, the treatment was confined to cold applications to the head. An hour and a half later the face became livid, the pupils were widely dilated, the pulse fell to 92, the temperature rose to 103.4, and respiration became intermittent. The pneumogastrics were then faradized, and the normal respiration returned. Half an hour later symptoms of collapse set in, the pupils became contracted, the face grew pale, and the heart almost ceased to beat. A hypodermic injection of $\frac{1}{15}$ grain of strychnia was then given. The beating of the heart was materially strengthened, and the pupils were dilated. These favorable symptoms, however, lasted but a short time, and the face again became livid, the heart-beats were fainter, and the pupils did not react. At this time about $\frac{1}{15}$ grain of strychnia was administered hypodermically. The action of the heart was again restored, but the respiration was labored. It was necessary to resort to faradization, which was kept up at intervals during the night and part of the next day. On the same afternoon the patient had recovered his consciousness. Notwithstanding the large quantity of chloral taken, there were no gastric symptoms, which was explained on the ground that the patient had eaten largely of rye bread before taking the poison. This case is illustrative of the value of strychnia in poisoning by chloral. Liebreich was the first to show the physiological antagonism between the two substances. It is noteworthy that faradization played an important but secondary rôle in the case.—*Berl. Klin. Woch.*, 1, 1874.

THE REPORTS OF THE SECTIONS OF THE AMERICAN MEDICAL ASSOCIATION have been crowded out of the present issue, and will appear in our next.

Medical Department of Life Insurance.

MORTALITY OF CONSUMPTION AND PARALYSIS.

COMPILED FROM THE RECORDS OF A LIFE INSURANCE COMPANY.

By ISAAC L. KIP, M.D.,
OF NEW YORK.

During a period of ten years, from 1858 to 1868, the total number of deaths from all causes was 1,448, of which 144 were under 25 years of age, 508 between 25 and 35, 615 between 35 and 50, 162 between 50 and 60, and 19 over 60. The deaths from consumption represented a total of 265, or a little over 18 per cent. Thirty-nine of the number were under 25 years of age, 135 were between 25 and 35, 80 between 35 and 50, 10 between 50 and 60, and one over 60. It will thus be seen that more than half of the deaths from consumption occurred between the ages of 25 and 35, whereas nearly two-thirds of the deaths from other causes (705 out of 1,183) occurred after the 35th year.

Continuing the investigation among the deaths from consumption, we find that in 60 instances—nearly 23 per cent.—the disease appears to have been hereditary, as ascertained by the data given in the original applications for policies. In one instance both parents and a brother had died of consumption; in another, both parents; in ten instances, a parent and a brother or sister; in twenty instances, a parent; in eighteen instances, a brother or sister; in nine instances, two or more brothers or sisters; in one instance, two aunts. Of the remaining 205 cases, six had previously had "spitting of blood;" four, "bronchitis;" two, "slight cough;" one, "asthma;" one, "pneumonia;" one, "chronic diarrhœa."

The deaths from "apoplexy" and "paralysis" numbered in all 195, or nearly 13 per cent. of the deaths from all causes. Eight were under 25 years of age, 49 between 25 and 35, 100 between 35 and 50, 33 between 50 and 60, and 5 over 60. The only evidence of anything like an hereditary character in the disease lay in the fact that the same or allied diseases had carried off one or more members of the family in sixteen cases (over 8 per cent.). In 95 instances the height and weight were recorded. Arranging these in the form of a table, together with the averages, according to the American standard, we obtain the following:—

No. of individuals involved.	Height.	Average weight, lbs.	American standard, lbs.
1	4 ft. 11 in.	100	—
1	5 ft.	152	—
0	5 ft. 1 in.	—	120
1	" 2 "	86	125
1	" 3 "	130	130
3	" 4 "	138	135
9	" 5 "	141	140
12	" 6 "	151	143
18	" 7 "	152	145
14	" 8 "	156	148
14	" 9 "	158	155
9	" 10 "	159	160
7	" 11 "	177	165
2	6 ft.	185	170
1	6 ft. 1 in.	152	—
2	6 ft. 2 in.	205	—

In seventeen instances (20 per cent. of the entire number) the weight *exceeded* the 20 per cent. usually allowed for deviations from the standard. In only one instance did the weight *fall below* the 20 per cent. allowance in the other direction. The general average, however, was somewhat above the standard.

ON THE PROTECTIVE VALUE OF VACCINATION.

By ALBERT MULLER, M.D.,
WALDHEIM, GERMANY.
(Translated * by Normand Smith, M.D., of New York.)

In consequence of the small-pox epidemics which have infested Germany for the past few years, the old controversy over the advantage of vaccination, which the scientific medical world justly regarded as settled, has been again revived. In spite of all the statistical proofs which have been repeatedly adduced, the opponents of vaccination, mostly laymen, dispute anew the advantages of the same, and by continued agitation have made it necessary to review the question once more. If the alleged proofs adduced by the other side are too gratuitous and too unworthy of criticism to demand again and again a serious refutation, the whole controversy has, on the other hand, accomplished this much, viz.: it has shown that the small-pox statistics, although very copious, present defects which offer occasion and opportunity for objection. Now if a question, in itself scientific, attains such increased practical importance that the legislature takes it in hand, and proposes to decide it in accordance with the opinion of the large and influential majority of the physicians and of the public—which it would be virtually doing should it sanction the contemplated introduction of compulsory vaccination—it is desirable that the basis for this legislative action be made perfectly sure and secure against any reasonable doubt. It is hoped that the following communication will contribute somewhat to this.

Very nearly all the statistics that have been made up to the present time are defective, because they are almost entirely *mortality statistics*, and give only unsatisfactory information in regard to the liability to contract the disease.† They limit themselves to giving only an approximate estimate of the *morbidity*. The effect of vaccination on the prevalence of the disease thus remains almost entirely undiscussed, or—like the question of its influence upon the mortality of the disease—it can be tested only by the small fraction of patients who furnished the material for observation.

If statistics of this kind be derived from hospitals, or if they include only certain strata of the population, doubts may be justly raised whether the numbers thus obtained can, without further restrictions, lay claim to general availability, or whether they should not be applied only to the particular epidemic from which they have been taken. For the purpose, then, of removing as far as possible the objection that the general correctness of the numbers obtained ought not to be trusted, because no account had been taken of the number of cases of sickness which did not result in death, we should endeavor to obtain a complete general view of some one epidemic, in order to study the effect of vaccination on morbility as well as mortality. Besides, it is necessary at the same time to

* From the "*Archiv der Heilkunde*." 15ter Jahrgang, 2tes Heft. 1874.

† The Germans use the term "morbility" to convey this idea of liability to contract the disease, and we shall take the liberty of using it here in that sense.—Transl.

ascertain as accurately as possible the number of persons living in the place at the time of the epidemic, and what proportion of them had been vaccinated. It is only in this way that we can obtain a direct and pretty sure opinion as to how great has been the protection of vaccination. Dr. R. Flinzer, whose excellent paper (The Small-Pox Epidemic in Chemnitz and Environs in 1870 and 1871) I received while writing this article, appears to have fully accomplished this object. He bases his communications on more extended and comprehensive statistical calculations than I have been able to make.

With these facts in view I endeavored to obtain a comprehensive survey of the small-pox epidemic which prevailed in the city of Waldheim in 1872, and lasted until April, 1873. This was possible only by inquiring from house to house, and then only after the city authorities had given their sanction to the undertaking. By my advice two lists were drawn up in the month of March of the present year, one of which included all those who had been attacked with the disease, together with the name, sex, age, dwelling, information as to how they had caught the disease, occupation, proof of vaccination, time and result of the attack, condition of dwelling, and mode of life; while the other specified the number of persons in each house who had or had not been vaccinated, the number of doubtful cases, and the number of persons revaccinated at a given period (beginning of 1873) of the epidemic. The objection may be raised that material obtained in this way is not reliable; nevertheless the sources of error are not so great as would at first appear. In the first place, owing to the limited proportions of the field, it was possible in most of the cases to establish the correctness of the information given in regard to the sickness; and in this way I have been able to exclude the doubtful cases, allowing only such to be recorded in which a distinct eruption was present. But even laymen learn to recognize a distinct eruption during an epidemic; and I am convinced that the eruption of other diseases is very seldom mistaken for variola. The information regarding vaccination can lay claim only to an approximate correctness; since, however, the two lists in part control one another, and it is found, upon comparison, that the two almost exactly agree in those parts which are common to both, we can assume that no important mistakes have occurred. Nor is there any reason for supposing that incorrect information was wilfully furnished.

I have also been able, through the kindness of the district physician, Dr. Leonhard, to make use of the statistical reports of the city, as well as of its burial permits. These also served as a control upon a portion of the cases. The following are the results obtained according to the above-mentioned plan:—

From January, 1872, to April, 1873, inclusive, there were in the little town of Waldheim 250 cases of small-pox (including the mildest cases), *i.e.* about 5 per cent. of the population.* Among these were 124 who had been vaccinated (including those who had had small-pox before), and 126 who had not been vaccinated, or whose vaccination was unsuccessful.

Waldheim had towards the end of 1872, not including the house of correction and the garrison, a population probably of about 5,200 souls (after the census of 1871, 5,145). Among these were 4,713 who had either been vaccinated or had had the small-pox (= 93.2 per cent. of the population), and 342 (= 6.8 per cent.) who had either not been vaccinated at all, or in whom the vaccination had been unsuccessful.* To these figures were added those of each category who had died up to the time of making up the lists.

Of the number still remaining to complete the estimated number of the population, a part may be found among the children just born, and hence not included in the calculation, while the remainder, for reasons not ascertained, could not be traced; at all events they do not change the result, because they are in all probability distributed on both sides, according to their proper percentages.

According to this, 2.6 per cent. of those vaccinated (124 out of 4,713) and 36.8 per cent. of those not vaccinated (126 out of 342) took sick. The proportion in Chemnitz, according to Flinzer, was 1.61 per cent. of the former, and 57.22 per cent. of the latter.

It must not be forgotten that the number of those vaccinated was almost 14 times larger than of those not vaccinated. If vaccination afforded no protection against small-pox, and we were to assume that those who have been vaccinated are attacked as often as those who have not been vaccinated, then in the present case 1860 † persons ought to have taken the disease. This enables us, therefore, to calculate the injury which the neglect to vaccinate is capable of causing. The following table gives a survey of the progress of the epidemic:

TABLE I.

Number of Individuals Sick.

1872.	First Half.	Second Half.	Total.
January	2	1	3
February	3	..	3
March	..	..	..
April	1	..	1
May	1	2	3
June	2	2	4
July	2	3	5
August	10	18	28
September	22	23	45
October	26	19	45
November	25	27	52
December	15	12	27
1873.			
January	10	3	13
February	8	5	13
March	2	5	7
April	1	..	1

The epidemic is remarkable from the fact that its rise was very rapid, attaining, as it did, almost its full force within a month; while its decline, though at first equally rapid, was afterwards slower.

The following combination (Table II.), according to age and with the separation of the vaccinated from the unvaccinated, confirms in general the well-known experience that the first years of life contribute the greatest number of small-pox cases,—obviously because the majority of the unvaccinated are included in this age. During the first 5 years there were 100 cases (= 40 per cent.), of whom 88 were unvaccinated, which is about 26 per cent., taking 342 as the whole number. Vaccinated children, though seldom attacked, do sometimes take the disease, but generally very lightly; this I am able to affirm from personal experience.

* Flinzer gives 5.6 per cent. for Chemnitz.

* In Chemnitz (Flinzer), 85.5 and 14.5 per cent.
That Waldheim showed a somewhat better ratio for the *vaccinated* than Chemnitz, is not remarkable, since vaccination was practised very diligently there until within a short time, and the agitation against vaccination did not begin to gain ground before the year 1872.

† 5,200 − 145x0.368 = 1,860.—*Transl.*

TABLE II.

Number of Individuals Sick.

Age.	Vaccinated.	Unvaccinated.	Total.
1 year	3	30	33
2 years	3	19	22
3 "	2	17	19
4 "	2	12	14
5 "	2	10	12
6–10 "	9	12	21
11–15 "	12	10	22
16–20 "	25	4	29
21–25 "	9	3	12
26–30 "	11	..	11
31–40 "	28	4	32
41–50 "	11	3	14
51–60 "	6	1	7
61–70 "	1	1	2
	124	126	250

Some will be inclined to maintain that these vaccinations must have taken imperfectly. From between the 10th and 15th years onwards the number of cases of small-pox among the unvaccinated diminishes, while among the vaccinated the number of cases increases, and, with a certain amount of variation, attains its maximum between the ages of thirty and forty. From this we see that the protection afforded by the first vaccination diminishes from between the 10th and 15th years onwards, which confirms the expediency of re-vaccination. These, however, are well-known and sufficiently demonstrated facts.

The protecting influence of vaccination comes out in still bolder relief when we examine the mortality rate. Out of 250 patients, 66 died (= 26.4 per cent.; 1.3 per cent. of the entire population). They are distributed according to age and according as they were vaccinated or not, as follows:—

TABLE III.

	Number of Deaths.			Percentages.		
Age.	Vaccinated.	Unvaccinated.	Total.	Proportion of deaths to cases of sickness.	Ditto, where they had been vaccinated.	Ditto, where they had not been vaccinated.
1 year.	..	20	20	63.6	(33.3)	66.6
2 years.	..	8	8	36.4	....	42.1
3 "	..	8	8	42.1	....	47.0
4 "	..	6	6	42.3	....	50.0
5 "	..	6	6	50.0	....	60.0
6 "	..	1	1			
7 "	..	..	..			
8 "	..	1	1	9.5	...	16.6
9 "	..	..	..			
10 "	..	..	..			
11–15 "	1	..	1	4.5	8.3	....
16–20 "	..	..	..	....	....	....
21–25 "	1	1	2	16.6	11.1	(33.3)
26–30 "	2	..	2	18.1	18.1	....
31–40 "	2	2	4	12.5	7.1	(50.0)
41–50 "	3	..	3	21.4	27.2	....
51–60 "	1	1	2	28.6	16.6	(100.0)
61–70 "	..	1	1	(50.0)	....	(100.0)
	10	55	65			

In the first 13 years all the deaths were of unvaccinated persons, with one single exception during the first year, where the cause of death was not ascertained by a physician, so that it is not positively known whether small-pox should be considered as the cause or not

During the first five years it is universally true that about one-half of the unvaccinated patients die; in the first year, even two-thirds. Among the vaccinated patients the first fatal case occurs in the 14th year; the remaining 9 occur among 91 cases of sickness in which the ages were between 16 and 70. These, too, cannot all be laid to the account of small-pox, for one of them, judging from the appearance of the body, was a case of diphtheria, and in two others a secondary pneumonia was the immediate cause of death. In order to place these numbers in the right light, we must make a comparison between Table II. and the first part of Table III. The last part of Table III. gives the percental reckoning, and invariably compares the corresponding lines of both tables with one another, *i.e.*, the total number of deaths with the total number of patients, the fatal cases among the vaccinated with the number of sick persons who had been vaccinated, etc. A few of the percental calculations are inclosed in parentheses because they seem worthless, owing to the smallness of the fundamental numbers. The mortality of the unvaccinated for the epidemic of this place amounts to 43.6 per cent.; of the vaccinated, 8.8 per cent.

In Chemnitz the total mortality amounted to 6.9 per cent., making 0.73 for the vaccinated, and 9.16 for the unvaccinated—a very low figure. My calculations correspond more closely with those of Thomas (Arch. d. Heilk. 1872, 2 u. 3 H.), who obtained 4.3 for the vaccinated, and 42.1 for the unvaccinated; and with those of Siegel (the same Archives, 1873, 3 H.), who found 8.1 for the former, and 35.5 for the latter. It shows that the epidemics of Leipzig and this place were very much alike as regards virulence. In the epidemic at Hamburg (Knecht, Archiv für Dermat., 1872, III. H.) 33.1 per cent. of the unvaccinated and 1.5 per cent. of the vaccinated died between the ages of 10 and 20 years. The calculation for the remaining ages is wanting. In the Leipzig Hospital, according to Wunderlich's report (Archiv. d. Heilk., 1872, III. H.), of those who had never been vaccinated and of doubtful cases, taken together, 65.1 per cent. died; of those vaccinated, or who had already had small-pox, 8 per cent. It should be observed, in this connection, that the numbers obtained from hospital records do not give a true picture of the whole epidemic. Keeping this in view, we see that Wunderlich's mortality rates for the unvaccinated are too high. They are estimated, for instance—namely, from all the reports of the Leipzig epidemic—at an average of 47.6 per cent.; in fact, it should be placed at a still lower figure, since it is necessary to remember that Thomas's observations also were chiefly among the lower classes.

Another argument, often brought forward, but never proved, against the protective power of vaccination, is the assertion that, in considering the fact that the unvaccinated get sick and die oftener than the vaccinated, we should not lay the blame to vaccination or non-vaccination, but attribute it chiefly to poverty, to insufficient nourishment, and poor dwellings—in short, to social misery, since it is a fact that the unvaccinated always belong to the miserable and poverty-stricken class. In other words, it is maintained that the class to which the vaccinated belong is far less likely to contract any disease, small-pox included, than that to which the unvaccinated belong;

and the small-pox mortality is proportionately no greater among these last than is the mortality incident to any other form of disease. Let us see how much this assertion is worth. We have in Waldheim a progressive system of assessment, according to which those liable to taxation can be arranged in convenient groups.

Among about 5,200 inhabitants there are 1,491 liable to be taxed. Of these

		Thalers.	Thalers.	Class.
80	return an income of over		1,000.	1st.
124	" "	from 500 to	999.	2d.
467	" "	" 200 to	499.	3d.
820	" "	less than	200.	4th.

If we calculate from these figures, which represent the number of taxable people, the probable number of the inhabitants belonging to each class, we have—

278 of the 1st Class,
433 " 2d "
1629 " 3d "
2860 " 4th "

The 250 cases of sickness may be divided among the different classes, as follows:—

In Class I. there were 5; in Class II., 24; in Class III., 55; in Class IV., 166. Table IV. shows the same thing, with additional details.

TABLE IV.

Number of Inhabitants.	Class.	Number of sick.	Per cent.	Average per cent.	Variation from the average.	Vaccinated.	Unvaccinated.	Related to each other as
278	I.	5	1.8	4.1	−2.3	5	..	..
433	II.	24	5.5		+1.4	20	4	5.1
1629	III.	55	3.3		−0.8	33	22	3.2
2860	IV.	166	5.8		+1.7	66	100	2.3

It follows, then, from the previous table that the lowest taxable class gets sick the oftenest, and the first class the most rarely. It will also be noticed that the third class comes next in order to the first, as regards the disposition to sickness; while the second class surpasses the average almost as much as the fourth does. Then, if we examine this striking ratio of the second class somewhat more carefully, we see from the lists that only the four unvaccinated persons (all of whom, by the way, died) were under six years of age, while all of the remaining vaccinated persons were more than 14 years old, viz., 7 between 14 and 20 years, 2 between 21 and 30, 7 between 31 and 40, 3 between 41 and 50, and 1 was 59 years of age. In other words, they had all reached the age when, according to universal consent, the protective influence of the first vaccination is only very weak, or has altogether disappeared; they fall sick almost as often as the last class on the list (notwithstanding they belong to families who are in comparatively good circumstances), and obviously because the first vaccination afforded them insufficient protection or none at all—for it must be borne in mind that, up to the present time, revaccination has been seldom performed among the better families of the middle or burgher class. The first class occupies the most favored position of all as regards susceptibility to contract small-pox, the number of cases having been considerably under the average, and the five cases mentioned having been of a mild type.

Those belonging to this class have all been vaccinated, and the greater part of them also revaccinated; and, besides, they avoid coming in contact with small-pox patients as much as possible.

The figures in the 3d class come very near to the average; that is, about $\frac{1}{30}$ of the population belonging to this class take sick. The unvaccinated take the disease oftener: they constitute $\frac{2}{3}$ of all those taken sick. It should be specially noted that *the vaccinated persons of this class do not get sick oftener than the vaccinated of the 1st class*, the average for both being about $\frac{1}{30}$ of those belonging to each class.

The 4th class, which includes workingmen as well as the scum of the population, contributes absolutely and relatively the largest share; about $\frac{1}{17}$ of those belonging to this class are attacked by small-pox. The reason of this can be seen from the ratio of the vaccinated to the unvaccinated (sick persons), which is as 2:3. While the number of the vaccinated in all the other classes exceeds that of the unvaccinated, here the ratio is the inverse: out of 166 sick people only 66 had been vaccinated. The 66 vaccinated persons constitute here also only a little more than $\frac{1}{30}$ of all those belonging to the class, but not more than in the 1st and 3d, notwithstanding the difference in outward circumstances; the comparatively large number of sick people is chargeable chiefly to the unvaccinated. This observation receives further support from the following calculation: Among the population at large the proportion of the vaccinated to the unvaccinated was about as 15:1; accordingly the 4th class would have had about 2,670 vaccinated persons, and 190 unvaccinated. Of the former 66 took sick, *i.e.*, 2.5 per cent.—exactly the same ratio as was found for the vaccinated, taken as a whole. Among the 190 unvaccinated there should have been 70 cases (36.8 per cent.); in point of fact there would probably be 100, because in this class the above-mentioned proportion of 15 : 1 is not correct, but has been changed, to the disadvantage of the unvaccinated. It must not be forgotten that the agitation against vaccination has always found adherents in this class of society; that, moreover, every attention to health, vaccination included, is grossly neglected. The morbility per cent. for the vaccinated in the remaining classes is, in the 1st, 2.0; in the 2d, 5.0; and in the 3d, 2.2. Here, also, for reasons already discussed, the 2d class only exceeds the normal per cent., while among the rest, the different taxable classes, strange to say, give proportions approximatively the same. Hence it follows that indigent and limited circumstances do not exercise any considerable influence on the frequency with which the disease is contracted. Whether other diseases are affected by the conditions just mentioned, I shall not attempt to decide. It is certain, however, that vaccination exercises a very decided influence on the tendency to take small-pox.

The mortality of the individual classes corresponds closely with the morbility. In the 1st it is = 0, in the 2d it amounts to 25 per cent.; in the 3d, 18.8; in the 4th, 30.1, as will be seen from an examination of the following table:

TABLE V.

Class.	Number of Inhabitants.	Number of deaths from small-pox.	Vaccinated (of the deaths).	Unvaccinated (of the deaths).	Percentage of the sick.
I.	278	..	..	..	.....
II.	433	6	2	4	25
III.	1629	10	2	8	18.18
IV.	2860	50	7	43	30.1

Again, we find that it is among the unvaccinated that the high mortality rates occur; and among the last class on the list no more persons die of small-pox (notwithstanding their unfavorable circumstances of life) than in the other classes, if they have only been vaccinated. In the 4th class, 10 per cent. of the vaccinated died, of the unvaccinated 43 per cent.; in the 3d class, 6 per cent. of the vaccinated, 34.3 per cent. of the unvaccinated; in the 2d class, 10 per cent. of the vaccinated and unvaccinated taken collectively.

These figures show most convincingly how great an influence vaccination exerts on morbility and mortality in small-pox, and on the other hand how little both are affected by external circumstances.

The 250 cases are distributed among 110 houses (about ⅓ of the whole number), but not uniformly in all quarters of the city. Among 47 houses there was only one case; among 31, there were two cases; among 13, three; among 6, four; among 5, six; and in one house there were eight cases, and in another eleven. The houses with the largest number of cases (from 4 upwards) are all situated in the thickly settled parts of the city, where the epidemic was the fiercest; more than the half of them are in one long street. The unvaccinated constitute almost always the majority of cases in a house; and where there are more sick persons who have been vaccinated, they are always, without exception, adults. It is in the thickly settled parts also, that the large majority of deaths occur, and almost all of them were among the *unvaccinated*, whose mortality here amounts to 50 per cent.

In this connection I could give many more interesting details, if I were not afraid of making this report too extended.

Finally, allow me to make a few remarks on the intended introduction of compulsory vaccination. I do not belong to those who admire this plan, principally because it appears to me very inconsistent that on the one hand we should give every man unlimited freedom to take care of his health according to his own judgment (this has been secured by the privilege accorded to all physicians of practising medicine as they choose), while on the other we attempt to compel him to use a certain remedy for a certain disease.

They say that this is done in order not to allow the innocent—*i.e.*, the vaccinated—to suffer with the guilty. But are the vaccinated really in such great danger?

Surely only when they are vaccinated unsuccessfully or not revaccinated at the right time. All small-pox statistics prove this. Whom, then, do they wish to protect? Those who will not allow themselves to be vaccinated? Strictly speaking, however, they have no right to do it. From the stand-point of public hygiene, compulsory vaccination cannot be recommended so long as there is a preventive against small-pox which is accessible to every one at all times. For this last, ample provision should of course be made.

At most, then, there might be some question about the advisability of vaccinating infants. But here compulsory vaccination would not help matters, for we could not compel children to be vaccinated immediately after birth, and yet, unless we did so, they might catch the disease before the proper period for vaccination arrived. The difficulty of enforcing compulsory vaccination would probably result in its shipwreck; at all events, it will never satisfy the expectations of its advocates. The small-pox calamity teaches rather that the unrestricted liberty of carrying on any business may react in an injurious and unexpected manner upon the field of practical medicine. The same rule cannot be applied to all cases—and compulsory vaccination is certainly not the best means for counteracting this injurious influence.

ON THE WASTE OF LIFE BY PREVENTABLE DISEASE.*

By R. BRUDENELL CARTER, F.R.C.S.,

OPHTHALMIC SURGEON TO ST. GEORGE'S HOSPITAL.

In this dilemma [the selection of a topic] I was reminded of the accession to political power of a party leader who has recently declared himself plainly with respect to the want of improved legislation for the protection of the public health, and it occurred to me that in such a conjuncture it might not be unseemly if I were to invite your attention to certain sanitary questions which may soon afford occupation to the Legislature. On these questions the members of our profession should, I think, by virtue of superior knowledge, claim to be the guides of public opinion; and, in order to assert this claim, and to endeavor to show that it is well founded, I propose to address you to-night upon "The Waste of Life by Preventable Disease."

In order to do this profitably, it seems necessary, in the first place, to surround the phrase "preventable disease" by some kind of definition. In a certain wide sense, we may say that every disease is preventable; for, if we were all to live in strict accordance with the dictates of reason and physiology, there can be little doubt that we should, in most cases, die only of natural decay. But the diseases which I have now in my mind, and to which I think the word "preventable" may most properly apply, are those that depend, if not for their existence, at least for much of their prevalence and of their severity, upon the acts and defaults of the community, rather than upon those of the individual. We know, only too well, that every large aggregation of human beings is attended by a liability to outbreaks of epidemics of various kinds; and that, as the aggregation increases in its density and in the number of its units, this liability increases also, not merely in a direct, but in a quadratic or cubic ratio. Now to these epidemics, which have, if not their causes, certainly the conditions of their most dire activity, in the accumulated waste and excretions of many persons, the quality of "preventableness," if I may coin a word for my necessity, must attach in a peculiar manner. It is manifest, I think, that a community might be so ordered that its members should neither do nor suffer harm by virtue of their close proximity to each other; but it is also manifest that the stringency of the necessary precautions would have to be calculated (and this is a point apt to be overlooked) not upon the mere ratio of density of population, but upon the higher ratio of the increasing proneness to disease. In England, at this time, there are many persons who spare neither expense nor trouble in their endeavors to secure the health of themselves and of their families. There are many who take little heed of such matters, and there are some who sacrifice health to foolish or vicious indulgences. But all alike are exposed to innumerable causes of sickness from which they are powerless to shield themselves, and concerning which the careful have no advantage over the careless, except such as may be due to a greater personal power of resisting morbid influences. Typhoid fever, like death itself, comes with the same step to the huts of paupers and to the palaces of kings.

* An extract from the annual oration delivered before the Medical Society of London, and printed in full in *The Lancet*.

The ordinary channels of contagion, so far as we are acquainted with them, are such that all classes and ranks are about equally liable to the invasions of disease. The laundress, who receives linen from an infected household, diffuses the infection not only among the homes of her customers, but also among the cottages of her workpeople, or among those that fringe the water-course into which her drainage is led. The school-keeper who, on the outbreak of scarlet fever in his establishment, scatters his pupils far and wide over the land, spreads contagion not only in the households to which they immediately proceed, but also among the families of domestics and other dependants. So much is this the case, so much is it a matter of constant experience, that infectious maladies may be "caught," as the phrase is, we know not how, that personal carefulness of health is distinctly discouraged by the familiar knowledge that it may so easily be rendered nugatory. But we know also, on the other hand, that many of the conditions which foster contagious diseases, and many of the channels through which they spread, are fully under the control of the community, and that really the only practical question with regard to the exercise of that control is whether the balance of advantage is distinctly on one side or the other. People in general have no conception, have not even a conjecture, of the annual amount of pain and loss which, in various ways, epidemics inflict upon the community. They see that the restraint of epidemics, to be effectual, must be accomplished at the cost of some restraint of personal freedom; and, while they are not sure that the desired end would, after all, be attained, neither are they sure of the extent or character of the disadvantages which restraints on freedom might entail. Now the diseases of which I wish to speak to-night as being preventable, are those only against the propagation of which the community is powerful, whilst the individual is almost absolutely powerless; and these, for all practical purposes, may be taken to correspond with the class called "zymotic" by the Registrar-General. The mortality from this zymotic class may form the basis of an estimate of the ravages of preventable disease amongst us, and may serve to show the magnitude of the evils which, for want of proper sanitary legislation and administration, we, as a people, are condemned to endure. There are two members of the class, however—namely, rheumatism and diarrhœa—which it is doubtful whether I ought to include; since they are, both of them, in great measure attributable to the want either of personal or of parental care. But the mortality directly produced by rheumatism, and registered under that head, is altogether insignificant; and the inclusion of diarrhœa may, I think, fairly be balanced by the exclusion of phthisis, which produces a far larger number of deaths, and which, as Drs. Buchanan and Bowditch have shown, is clearly capable of being much diminished by those public sanitary measures which serve to dry the soil beneath and around habitations. I think therefore that I shall not be far wrong in assuming that the known facts about the zymotic class will be sufficient for the purpose that I have at present in view—that is to say, that they will furnish us with grounds for rational conjecture concerning the amount of disease which might be prevented, almost, if not altogether, by the intelligent and well-directed action of the State. Concerning the possibility of such prevention it is not necessary that I should argue before this assembly; neither shall I enter upon the question, which in the present state of knowledge is insoluble, whether the diseases of the zymotic class are always produced by infection, or whether they sometimes originate anew under the operation of unknown influences. It is part of the common stock of medical knowledge that they at least exist subject to conditions; and that, if the conditions were unfulfilled, the diseases themselves must disappear.

A statement expressed only in figures, when it deals with numbers larger than those of which we have habitual practical experience, gives rise to but faint conceptions in the mind. But, even when thus stated, the mortality from the zymotic diseases is startling. Taken collectively, during five successive quinquennial periods, from 1847 to 1871, these diseases, in the period from 1847 to 1851, destroyed the lives of 512,261 persons, out of a total mortality of 2,028,367, or occasioned one death in 3.96. From 1852 to 1856 they destroyed 472,690, out of 2,082,346, or one in 4.4. From 1857 to 1861 they destroyed 375,085, out of 2,168,087, or 1 in 5.78. From 1862 to 1866 they destroyed 560,015, out of 2,397,532, or one in 4.28; and from 1867 to 1871 they destroyed 562,487, out of 2,476,731, or one in 4.4. During the whole 25 years they caused the loss, in round numbers, of two millions and a half of lives, out of a total mortality of eleven millions, or one death in 4.48, the exact figures being 2,482,538, and 11,153,063. If we add another half million of deaths for another five years, we arrive at the result that three millions of people, a number approximately equal to the population of London, are killed by zymotic diseases in the course of each generation.

The mortality thus produced, however, is not the whole of the evil which I have to describe, and it may be doubted whether it is even the worst part of it. Let us first consider the question of prevalence. On this part of the question I have referred to the Reports of the London Fever Hospital, and I have examined the proportion of deaths to admissions in that institution during the nine years from 1863 to 1871. There were in all 27,332 cases, chiefly made up by typhus, enteric, and scarlet fevers, but including 1,192 described as febricula, in which there were no deaths, and 4,117 of "other diseases," such as small-pox, measles, a few cases of pneumonia, and some others; the total, therefore, not unfairly representing the zymotic class as a whole. Among the 27,332 patients there were 4,490 deaths, or almost precisely 1 in 6; while, in the case of typhoid fever taken alone, the proportion of mortality was very nearly the same. There were 3,692 cases of typhoid, and 611 deaths, or 1 in 5.94. It may be assumed that the careful attendance and good nursing of the hospital would diminish mortality, and, on the other hand, that the cases admitted would be severe. If we set one of these conditions against the other, we shall perhaps be right in regarding the mortality of 1 in 6 as a fair representation of what usually occurs; so that, in order to obtain a notion of the prevalence of zymotic diseases, we must multiply by six the deaths laid to their account by the Registrar-General. This would give about 600,000 cases a year, or 18,000,000 cases in a generation. My own impression, however, is that this estimate is far too low, because, when we include mild cases of the exanthemata occurring among the better classes, I do not think the total mortality from zymotic disease is nearly so much as 1 in 6. Probably 1 in 12 would be a good deal nearer the truth. It has come to be regarded as customary that every person should pass three or four of these diseases, and parents so little expect their children to escape measles, and whooping-cough, and scarlet fever, that it is made a matter of congratulation when these occur in a family at some

not specially inconvenient season. The estimate of prevalence, therefore, certainly does not err on the side of excess, and I suspect that it errs very much on the side of deficiency. Still I do not hesitate to adopt it, because I think it entitles me to assume that each of the 600,000 cases which certainly occur annually may be regarded as possessing a character of at least moderate severity, and as having a corresponding period of duration.

According to the proportions existing at the last census, in 600,000 persons there would be 292,280 males and 307,720 females. Of the males, 154,909 would be 20 years old and upwards, and 137,371 would be under 20 years old. The females of 20 or upwards would be 172,324, those under that age 135,693; so that, including both sexes, there would be 327,223 adults, and 272,767 children or young persons. Dr. Buchanan has been good enough to furnish me with a conjectural estimate of the duration of illness in the chief diseases of the zymotic class, reckoning it, of course, from the first appearance of the symptoms to the time when the ordinary duties of life may be resumed. I cannot venture to oppose my own small experience to his; but his estimate appears to me to be low. He sets the duration of typhus and of relapsing fever at five weeks, that of enteric fever at six weeks, that of febricula at three weeks, and that of scarlet fever at four weeks; or an average of four weeks and a half for each case. Let us apply this to the numbers already stated, and first to the 154,909 adult males. We cannot place the lost earnings or productiveness of each patient at a smaller sum than one pound per week, nor the cost of his maintenance, medical attendance, and nursing, at less than another pound, making the total loss and cost for each male adult nine pounds per illness, or £1,349,181 in all. In the case of adult women we may perhaps estimate the total loss and cost at six pounds per illness, or £924,454; and in the case of children and young persons at one pound per illness, or £172,767. We have here a total sum of £2,596,402 to represent what would be the immediate and direct annual pecuniary cost and loss by zymotic disease to the community if it fell upon the wage-earning classes alone. The greater cost of its incidence upon the better classes cannot be estimated from any data known to me. The illness of the Prince of Wales disturbed the whole current of English society, and the value of such a life as that of the Prince Consort, or, coming to more recent times and to our own sphere, the value of such lives as those of the Rev. Charles Butter and of Dr. Peter Allen transcends my humble powers of expression. The money cost, whatever it may be, falls partly, of course, upon the relatives of the sick, partly upon the members of clubs and benefit societies; partly, and very largely, upon the rates for the relief of the poor. The one hundred thousand premature interments must cost at least £2 each, and they raise our money total to £2,796,402 yearly. Besides the mortality and the cost of sickness, we must also take cognizance of the considerable percentage of imperfect recoveries. It is my lot, at two hospitals, to see a large number of children suffering from eye disease, and especially at the Royal South London Ophthalmic Hospital, around which there is a poor and densely crowded population. My inquiries as to the origin of the malady are constantly followed by the reply—"Ever since he had the measles." In the Irish Census return for 1871 it is stated that out of 6,347 blind persons living in that country, 526 had lost their sight from small pox, 31 from measles, 34 from scarlatina, and 99 from fever, or 690 in all; so that more than one-tenth of the existing blindness was due to zymotic disease. Enteric fever, scarlet fever, small-pox, and measles all entail upon some of their victims an indefinite period of broken health or of impaired usefulness; of which Bright's disease after scarlet fever, or a consumptive tendency after enteric fever, or blindness produced by small-pox, may be cited as extreme examples. In cases of a less marked kind they often leave a protracted feebleness that may be communicated to offspring. The miscarriage of pregnant women is common in typhus, still more common in relapsing fever, and occurs occasionally in all zymotic maladies, so that it seems reasonable to suppose that the fœtus in utero may habitually be more or less injured in such cases. Here, of course, we have no very firm ground under our feet, and no data upon which to found any numerical conclusions. But the experience of every one in this room will bear me out when I affirm that the evils thus referred to are terribly real in their character, and terribly large in their extent.

The mention of affections of the eye reminds me that some of the most important of the preventable diseases would almost, or altogether, escape notice if I were guided in my enumeration of them by the mortality returns alone. There are some, and these not the least formidable, that either do not kill at all, or that do not kill immediately, or in any proportion to their prevalence. When people, especially children, are crowded together under unnatural and insanitary conditions of living, they are prone to suffer from a very grievous malady, known as contagious ophthalmia; and the wisdom of the Poor-law Board during the last few years has developed this malady in workhouses and pauper schools in a manner to which previous English experience affords no parallel. The precise facts with regard to its prevalence are known only at Gwydyr House; and I have been credibly informed that, when a member of the late House of Commons gave private notice of his intention to move for returns showing the truth, he was told that his motion would be opposed with all the strength of the Government, and he was induced, as a matter of party allegiance, to refrain from bringing it forward. I heard this without surprise, for the truth was far too bad to bear the light. I have been able to obtain, from a private source, a copy of a report made to a Government inspector by the medical officer of one of the schools. It states, among other curious matters, that, of 1,062 children in the school in question, only 182 had escaped ophthalmia; 163 had suffered from one attack of the disease, 151 from two attacks, 110 from three, 75 from four, 54 from five, 58 from six, 22 from seven, 25 from eight, 7 from nine, 11 from ten, and 204 from more that ten attacks. Concerning the ultimate results of these attacks I have no information; but an analogous condition of things once existed in Irish workhouses, and there the facts have been made known. During the thirteen years from 1849 to 1862, 118,835 cases of epidemic ophthalmia occurred in these workhouses. Among them, sight was partially injured in 1,925 cases, one eye was destroyed in 1,270, and both eyes were destroyed in 517; so that 1 in 32 of those who were affected suffered permanently in a greater or less degree. This proportion would give only 28 permanent sufferers among the children mentioned; but, in another part of the school return from which I have quoted, I find it said that, out of 1,195 children, 347 had "granular lids after ophthalmia;" and I have no doubt that, in all or nearly all of these, sight would eventually be greatly impaired, and that in many it would be wholly lost. The preventable diseases that

do not kill immediately, although they perhaps do more than any others to cripple and destroy usefulness, to sap the powers of life, and to produce degeneracy of offspring, belong chiefly to the enthetic class. There are well-known differences of opinion with regard to whether the legislation that would diminish these diseases would not be a greater evil than the diseases themselves. For my own part, in this case, as in most others, I should say "*Salus populi suprema lex;*" but I have no desire to enter at present upon a much debated question, which lies beyond the limits within which I propose to confine myself. There is no difference, among those who are acquainted with the facts, on the essential point that the legislation in question, where it has been carried into effect, has diminished the prevalence of disease in a very great degree; and there can be no doubt that a still further diminution would be the result if similar legislation were extended to places in which it has not yet been enforced.

(To be continued.)

THE VEXED QUESTION OF FEES.

By A MEDICAL DIRECTOR.

It has always appeared to us that the action of some County, and even State, Medical Societies in binding their members not to make examinations for Life Insurance Companies at a less rate than five dollars for each case, was one of very doubtful wisdom. If it be conceded that, in a given portion of the State, the current value of a visit to a sick person in comfortable circumstances is two dollars, upon what ground, it will be asked, do the physicians in this district base their claim to be remunerated at the rate of five dollars per examination. With the ordinary blank forms for medical examination in use among the great majority of companies, the time spent by the average medical examiner is not more than fifteen minutes. Hence these physicians cannot claim increased compensation on the ground of more time being required for an insurance examination than for an ordinary visit. Perhaps some will say: "More skill and experience are required to make a good examination for life-insurance than to treat a case of sickness." Very true; but the action of the society compels even the inexperienced beginner to make the same charge for his services as the old and skilled examiner, whose services are cheaply secured at five dollars an examination.

Another argument, brought forward by some, is, that the examination of candidates for life insurance now and then places the physician in such a peculiar position, that he cannot serve the insurance company rightly without detriment to his interests as a private practitioner; and that for this reason he is fully justified in charging a uniform fee of five dollars for every examination. This argument, which strikes us as being thoroughly sound, holds good only for the country districts and small towns; in the large towns and cities it will rarely apply, as the examiner will not often be called upon to examine one of his own patients. But here the cost of living constitutes another element which has to be taken into the account, and which in certain places justifies the examiner in charging more than his brother practitioner in the country. While the country examiner, then, bases his claim to a fee of five dollars on the ground that his interests as a private practitioner are injured to at least the extent of the difference between that amount and his ordinary fee in practice, the city examiner feels that he is fully entitled to it on the ground of the excessive cost of living. Both, in our judgment, are right; but why should they seek to secure these ends by so questionable a measure as a County or State Medical Society resolution, so framed as to outlaw all those who do not comply with its provisions? If an insurance company is imbecile enough to employ quacks, eclectics, and ignoramuses, no resolution passed by a State or County Medical Society will bring that company to its senses. If, on the other hand, the company is in the hands of enlightened men, who will listen to reason and who know that the best interests of the company depend upon the hearty co-operation of their medical examiners, the action of the society—partaking as it does of the nature of a strike—will only serve to disgust them with physicians as a class, and so probably put off, instead of hastening, the day of increased compensation.

At the present time there seems to be a universal desire among all the prominent life insurance companies to correct abuses, and to place all the branches of the business upon a solid, honest footing. If the fees now paid to medical examiners are insufficient, let an appeal be made, in proper terms, to the associated companies, and, if the reasons given are clear and satisfactory, the chances are that the appeal will be listened to.

Miscellaneous.

The Insuring of "Unsound" Lives.—At a recent meeting of "The Institute of Actuaries," in London, Mr. George Humphreys, M.A., read a paper on the practice of the "Eagle Life Insurance Company," with regard to the insurance of lives classed as "unsound." He gave full details of the rates of mortality prevailing amongst this class of lives, in the Eagle Company, during an experience of sixty-three years.

From June, 1808, till June, 1871, the Eagle Company insured 3,147 lives which they classed as "unsound," and added an average of six years to each life upon accepting the risk, and charged the premiums accordingly. These 3,147 cases Mr. Humphreys classified as follows: Gout, 418 cases—average age added to each life on entering, 4 years; hernia, 481—average age added, 3 years; organs of respiration affected, 281—average age added, 7 years; obesity, 45—average age added, 6 years; intemperate habits, 119—average age added, 7 years: family history and want of robustness, 579—average age added, 6 years; miscellaneous affections, 1,120—average age added, 6 years. Total, 3,147 cases; and average age added in each case, 6 years.

Although the additions to each age were made on no fixed principle when adopted, yet Mr. Humphreys found that, on the whole, the ordinary surplus had been realized on this class of business. The average duration of the entire 3,147 policies was ten years each; and of the policies in the case of hernia, twelve years each. Mr. Humphreys ascertained by this examination that hernia affected the duration of life very little. One of the most remarkable features in the investigation which Mr. Humphreys had made was, that most of the lives died from wholly different causes than those of the specified "unsoundness" on their being insured.

Any efficient medical examiner ought to be able to say what probable damage the life has sustained from rheumatism, ague, hernia, and other diseases not absolutely fatal, and how many years, in all likelihood, that particular life has been abridged by the attacks. —*Insurance Times.*

Original Lectures.

LECTURE UPON GENERAL THERAPEUTICS OF THE NERVOUS SYSTEM.

By E. C. SEGUIN, M.D.

GENERAL LIBRARY University of MICHIGAN

PART II.

(Phonographically reported for THE MEDICAL RECORD.)

CLASS B.

SUB-CLASS II.

Depressants and Anæsthetics.

(a)—Cerebral depressants. { Cold, bromides of potassium and calcium, opium, hydrate of chloral, food, etc., chloroform, ether, etc.

(b)—Spinal depressants. { Conium, bromide of potassium, cold and food.

(a). Cold is to be employed in the same manner as when we wish to produce an anæmic condition of the brain. The inclination to sleep experienced by persons exposed to severe cold, such as encountered in the Arctic regions, is an illustration of the effect which cold can produce upon the nervous system.

The India-rubber bag sometimes employed in making applications of ice diminishes the intensity of cold applied, and is inferior to the bladder ordinarily employed (*vide supra*).

Bromide of Potassium has usually been spoken of as acting through the blood-vessels, and causing their contraction and consequently anæmia of the parts they supply. Dr. W. A. Hammond and many others speak of the remedy as acting in this manner.

There has been some doubt expressed as to whether Kbr. is true hypnotic.

At present, perhaps, this is to be regarded as an unsettled question. For my own part, judging from my own experience and the testimony of others regarding Kbr., I have been led to conclude that, when given in sufficient doses, it acts very powerfully as a cerebral depressant. In health, I admit that no narcotic effects are obtained from a few doses of the medicine, but in cases of cerebral irritation, and insomnia from a variety of causes, its action is sure and immediate. In delirium tremens, for example, in such cases as are not complicated by degenerative liver and kidney disease, in the so-called sthenic cases, Kbr. given in doses of ʒ i. or more every hour, until ʒ iij. or ʒ iv. have been taken, will, conjointly with semi-darkness and quiet, cut the attack short by producing sleep. In 1866–67, while house physician to the New York Hospital, I had the opportunity of thus treating a series of cases of this disease with very satisfactory result. I say this while perfectly aware that several medicines seem to shorten the duration of delirium tremens, and that it is, under certain conditions, a self-limited disease.

In certain forms of insomnia seen in connection with fevers, the bromide of potassium may fail to produce sleep, because (?) of the continued influence of a blood-poison in keeping up the morbid state.

In the insomnia and delirium of pneumonia I have also seen speedy relief procured by ℈ij. or ʒ i. doses of Kbr. In the simpler (?) conditions of sleeplessness caused by anxiety, over-exercise of the brain functions, emotional disturbance, this remedy usually acts well. Perhaps the most convincing proof of the action of Kbr. upon the cerebrum is to be had from observing the effects of the long-continued use of large doses of the remedy. A condition called "bromism" is set up, characterized by stupor, deficient memory, aphasiform speech, tottering gait, loss of facial expression, salivation, mucous irritation, papular skin disease, etc. Although we see this result more often in the course of the treatment of epilepsy, yet it may be developed in persons not having this disease. The mental state of brominized persons is not unlike that of patients with dementia.

Hydrate of Chloral is, in my opinion, the best medicine that can be employed for producing sleep. It does not intoxicate, or disturb the digestive organs, as opium does. When chloral succeeds, and it almost invariably does succeed, it produces a calm sleep not followed by any special disturbance of the system.

I would have you bear in mind that this remedy is a much more direct hypnotic than opium, and yet that it does not possess the power of preventing the perception of pain. Hence a rule to follow is to give chloral in cases of insomnia not connected with pain. The physicians to insane asylums in Europe and in this country have found in chloral an invaluable agent for giving rest to patients suffering under mania in any of its forms. They have also testified to the very great safety attending the use of the medicine, many patients getting large doses of it nightly for months and years. Chloral may also be used in the cases where (*vide supra*) bromide of potassium is indicated, and the two may be given together. If you are to choose between these two drugs, use Kbr. if in addition to the cerebral irritation there exists some physical excitement (spinal irritation); chloral in cases of pure cerebral disturbance. The theoretical view, that Kbr. acts by causing anæmia of the brain, leads to the withholding it in cases of cerebral anæmia and mal-nutrition. This I believe to be an error, since in my experience the occasional giving of Kbr. (and chloral hydrate) in such cases has in no way hindered the good effects of restorative medicines.

The dose of hydrate of chloral may be, for adults, 15 gr. or ʒ i. In females, especially, it is well to try a small dose on your first trial. A scruple dose I believe to be a perfectly safe one for a man. The doses of ℈ij. and ʒ i. should be used in cases of acute mania, or severe delirium.

The conjoint use of bromide of potassium and chloral is very satisfactory. A drachm of Kbr. may be administered in the afternoon, followed at bedtime by grs. xx. or xl. of chloral.

Concerning the use of opium and its constituents in diseases of the nervous system I believe that I need say very little. I would have you always bear in mind the exceedingly unpleasant way in which this remedy affects very many females, producing insomnia and, later, vomiting and constipation. For these susceptible individuals (a few males must be included) some of the liquid compound preparations of opium, McMunn's elixir, the liquor opii comp., may be substituted for morphia or simple opium. In a very large number of cases of nervous disease we seek to relieve pain by the use of morphia. In such cases it is best administered hypodermically, in the form of strong solution of the sulphate, or acetate, or muriate. I must admit that my own patients seldom receive any but the sulphate of morphia injections, in the shape of Magendie's solution (16 gr. to ʒ j.), ♏ x. of which are equivalent to ¼ gr. morphia sulph. I am, however, in the habit of adding a little atropia, $\frac{1}{100}$ or $\frac{1}{80}$ grain to each hypodermic injection, for the purpose of remedying the nauseating and constipating effects of the morphia. My solution of atropia is composed of atropia gr. j., distilled water ʒ v.: ♏ j., containing $\frac{1}{300}$ grain atropia. I have employed this combination since 1867 with great satisfaction.

Food is a depressant, because it remedies the morbid irritability produced in the brain in cases of exhaustion, whether from hemorrhage or over-work.

Sometimes the effect of food is very marked indeed. Many of you have doubtless experienced a sensation of exhaustion, accompanied by headache, perhaps severe, which has been entirely relieved by taking a good meal. The headache perhaps has been made to disappear, even before the meal was completed, and you have felt immediately refreshed, and that without wine or other alcoholic stimulant.

In many cases of delirium and mania the effects of the persistent giving of nutritious food are evidenced by rapid improvement and cure.

b. Spinal Depressants. — Conium is the type medicine of this class, and seems to be the direct antagonistic of strychnia. It acts by paralyzing the spinal motor centres, from the nucleus of the third nerve down. This remedy can be used with benefit in spasmodic affections.

In small doses it produces a paretic condition of the spinal axis, indicated by partial ptosis, strabismus, or double vision, weakness of the knees; and the arms may become slightly paretic. These symptoms appear within an hour after the medicine has been taken. By the administration of larger doses, almost complete akinesis is obtained, which may last for half an hour or an hour, but is not dangerous.

The remedy should be given only once a day, and in many cases to the extent of partially paralyzing the patient.

A reliable preparation is the English *succus conii*, which may be administered in doses of from ʒ ij to ʒ vj once a day. An equally good form of conium is Squibb's fluid extract. I usually prescribe this, and give it in doses of ♏ xl. or ʒ j. Dr. John Harley, of London, has done much to give us a clear notion of the action of this remedy, and he has found it useful in chorea, epilepsy and other spasmodic diseases; he points out the necessity of obtaining the physiological effects of this and other drugs when we wish really to do good in affections of the nervous system. In epilepsy I have employed the fluid extract of conium in combination with Kbr., in epilepsy, with good results.

Bromide of potassium also acts directly upon the spinal cord as a depressant. It lowers the activity of the motor tract (though in a lesser degree than conium) and diminishes reflex excitability. Its use is consequently indicated in all affections in which reflex action is abnormally great, and in many such we obtain immediate and permanent good results from its administration. In various forms of convulsions, the eclamptic attacks of children, of pregnant and parturient women, Kbr. does good. Morbid excitement of the lumbar part of the spinal cord, as evidenced by nymphomania and satyriasis, is often relieved by this drug. Some forms of vomiting (in pregnancy, after inhalation of ether, etc.), spasmodic states of various sphincters, are also to be cured by Kbr. It is in the treatment of the great neurosis epilepsy that this medicine is the most employed, and it is concerning its usefulness in this affection that great discussions have occurred. The use of Kbr. in epilepsy was begun by several physicians about the same time, but Drs. Brown-Séquard and Laycock were the first to call attention to it. The generally received opinion is that Kbr. is the medicine which possesses more power than any other over epilepsy; that in the majority of cases the frequency and severity of the seizures are very much diminished while the medicine is being taken (the symptoms soon reappearing if it be discontinued); and that a case here and there may be cured by its use. In hospitals with large numbers of epileptic patients the effects of giving and withholding Kbr. are very strikingly in favor of the utility of the drug. For my part I wholly accept this as a correct estimate.

There are a few general rules to be observed in the treatment of epilepsy by Kbr.

In the first place enough Kbr. (and other bromides if you please) should be given to reduce the reflex function and keep it below the normal standard. A test of the sufficient action of the medicine lies in the reaction of the palate and fauces to irritation; a diminution or abolition of the well-known reflex movements of these parts indicating diminution of the reflex excitability. Another general rule is to give more of the medicine at night than in the day-time; a direction of great value, for which we are indebted to Dr. Brown-Séquard. We usually give three-day doses, and a dose in the evening twice or thrice the size of the day dose. A third, and most important rule is to administer the Kbr. in a perfectly continuous way for months and years. Dr. Brown-Séquard has known patients remain without seizures for two years while taking his prescription for mixed bromides, having a return of convulsive seizures in a short time after ceasing the medication. I have seen similar though less striking results.

There are a few epileptics who cannot tolerate the bromides; who become easily "brominized," and whose attacks are made worse by these drugs. These paradoxical patients are very rare, I believe. While recognizing the great value of Brown-Séquard's compound bromide solution (Kbr. + NH_4 br. + K1), I more commonly employ a simple solution of bromide of potassium, giving gr. v three times a day, and gr. xv or ʒ j at bed-time, at first in adults. Children require relatively very large doses of the bromides, and, contrary to what is sometimes taught, I see in anæmia no counter-indication to the use of the remedy, nor do I believe that any law can be laid down for the giving or not giving of it, from observations upon the retinal circulation. Such a view is based only upon belief in the more than doubtful physiological theory that cerebral hyperæmia and anæmia are usually prime factors in the pathological state called epileptic.

Class C.

Tonics and Restoratives.

By restoratives I understand, with Headland, those remedies which restore to the system an element, diminished by a disease, or whose diminution causes a disease. A few of this class are especially useful in diseases of the nervous system, two chiefly,—phosphorus and fats.

I would not be willing to admit that there is any defined morbid state of the nervous system which can be shown to depend upon a diminution of the phosphorus, which is so important an ingredient of nerve tissue, yet I am the first to recognize that in some nervous diseases much phosphorus is excreted, and that in very many of them much benefit, even to a cure, is obtained by giving phosphorus. In practice the various phosphates, the acid phosphates, the hypophosphites, etc., if they do good, do so very slowly, and are hardly to be used in the treatment of serious cases, except as adjuvants. Phosphorus itself may be administered in the form of the officinal oil, or in the non-officinal solutions (Thompson's), and as phosphide of zinc. The dose of phosphorus ranges from $\frac{1}{10}$ to $\frac{1}{12}$ grain; that of zinc phosphide from $\frac{1}{8}$ gr. to $\frac{1}{4}$ gr. In administering this powerful remedy, please bear in mind that some organizations are very susceptible to

its toxic influence. In cerebral mal-nutrition, in neuralgia, in "spinal irritation," in hysteria, and in varieties of paralysis, this drug is of the highest value.

Fatty food and cod-liver oil are indicated in the conditions which demand phosphorus.

Among the tonics the chief are strychnia, arsenic, zinc, iron, quinia, and cold. Cold should, for its tonic effect, be applied only for a short period of time. This may be done by sponging, the shower-bath, cold compresses, the cold sheet, and sea-bathing.

A corresponding reaction follows, which consists in hyperæmia and improved nutrition. (*Vide infra*, counter-irritants.)

We are unable exactly to explain why strychnia, or arsenic, or zinc should benefit the general nutrition, but daily experience teaches that these remedies are invaluable in many morbid states of the nervous system.

Strychnia, in cases of irritability, of hysteria, spinal irritation, and in some palsies, may be given in small doses for long periods of time; doses of $\frac{1}{60}$ gr. or $\frac{1}{32}$ gr. The action of arsenic is often marvellous in chorea, and very satisfactory in other nervous diseases. Fowler's solution is the arsenical preparation most commonly employed, and in chorea it should be dealt out with no sparing hand; doses of ♏iv., ♏vi., or even ♏x. being well borne. The oxide and lactate of zinc have been much used in states of exhaustion of the nervous system, after sexual excess, or in chronic alcoholism, and in epilepsy. In the nervous states caused by alcohol the zinc oxide proves almost as satisfactory as arsenic in chorea. I have usually employed it in combination with extract of nux vomica. Since the introduction of Kbr. into general use, the zinc treatment of epilepsy has fallen into (perhaps unmerited) disuse.

Quinia, in moderate doses, would seem to act as a tonic. It is possible that it does so by causing more food to be taken and digested, yet from the immediate improvement in well-being and in cerebral activity, which many experience while taking it, I am inclined to the opinion that this remedy does exert a direct effect (restorative?) upon the nervous centres.

Iron I have not spoken of, because it does not especially affect the nervous system. It improves the condition of the blood, and, by so doing, cures morbid states of the nervous system (neuralgia), which depend upon anæmia or chlorosis.

Perhaps it were well that I should here speak of two so-called specific modes of medication, very useful in nervous diseases, and which would otherwise not enter the classification offered you. I refer to the treatment of constitutional syphilis, which often gives rise to morbid states of the nervous system. Nearly all of these morbid states are a part and parcel of the third (tertiary) stage of syphilis, depending upon affections of fibrous tissues of bones, of blood-vessels, and upon the presence of gummata in the nervous centres. I would only speak of one point in connection with this subject, and that is the necessity of using the iodide of potassium in really effectual doses, giving from ʒ i. to ʒ vi. a day, until improvement takes place. You will be surprised to see how a patient with tertiary syphilis will gain while taking ʒ ss. of Kl. in the twenty-four hours, after having resisted smaller doses. No unpleasant symptoms attend the taking of large doses, provided that restoratives and good food be also given.

The other specific medication is the treatment of malaria in its original form by quinia. Malarial neuralgia is a well-known and an obstinate affection. It may be cured by quinia in the usual way; but a much more rapid removal of the disease is obtained by using the quinia in the shape of hypodermic injections over the affected nerve. We then obtain the specific effect of quinia on the nervous centre and counter-irritation on the nerve. Nearly seven years ago * I published the results of my experience with this medication in the New York Hospital, giving full details of the practice. As a general rule, in nervous disorders dependent upon malaria, do not err by giving *too little* quinia.

Class D.

Counter-Irritants.

By counter-irritation is understood a localized irritation, which modifies the nutrition or mode of activity of another part than that irritated, either just beneath it, or at a distance from it. Counter-irritants almost always act through the spinal cord, and their mode of action is typified by a morbid process that takes place as a consequence of severe burns. If a limb or part of the body be scalded or charred, the patient is not in danger merely because of the shock of the injury, or of the exhausting discharge accompanying the healing of the burn, or of the pyæmia which may take place during the continuance of this suppuration, but he is also likely to suffer from certain visceral complications which occur in parts bearing a definite relation to the burn. Brown-Séquard demonstrated many years ago that by cutting across the spinal cord, above the origin of nerves going to the burnt part, no visceral lesions occurred; thus proving that these lesions were set up by a morbid state of the spinal cord, produced by the burn. The burn corresponds to our counter-irritation, and the altered nutrition of the viscera to the distant effect produced. In the one case a morbid process is induced; in the other a beneficial change, not yet understood by us, is determined.

The alternate application of cold and heat does much to improve the nutrition of paralyzed parts, and is used for many special purposes.

Brown-Séquard has recommended the use of these means to prevent the formation of bed-sores, and to heal those which may be already formed.

The method consists in applying an ice or snow-poultice over the part for five or ten minutes, following this by the immediate application of a hot poultice. This should be done once a day over the parts threatened with the formation of bed-sores.

When the same thing is done twice a day to sores already formed, as a rule, sloughs come away, circulation is improved, and granulations will soon spring up. I have seen huge bed-sores healing under this treatment while the patient was failing.

The actual cautery is a means of the utmost value in the treatment of nervous affections. It is one, however, which has fallen into very great disrepute in consequence of the manner in which it was formerly employed. A burn, sufficient to produce suppuration, is not necessary, surface-irritation being what we seek to produce.

The theoretical view that surface-irritation is most useful, has, like several others brought forward in this lecture, a true physiological basis. It rests upon the well-known law that the terminal nervous twigs, and their special terminal bodies, are more irritable than nerve trunks.

Brown-Séquard has revived the use of the actual cautery; and by means of his form of cautery we are enabled to produce much skin-irritation, with little pain to the patient, and no subsequent annoyance from sore surfaces.

* On the Subcutaneous Use of Sulphate of Quinia in Cases of Malarial Neuralgia. New York Medical Journal, 1867, p. 402.

The cauterizing iron which he employs is tipped with platinum. The platinum never gets rough by ordinary heat, as does iron, and there is, consequently, a smooth surface to come in contact with the skin every time the cautery is used.

The white-heat is necessary in using the actual cautery, because it produces the maximum degree of irritation to the nerve, with a minimum of pain.

The cautery thus heated (in a coal fire) should be rapidly drawn over the part selected, four or more strokes, of from one to six inches in length, being made. This can be done in a very few seconds, and in many cases no real pain is experienced by the patient. The strokes remain as reddish-brown welts, which are quickly surrounded by a zone of hyperæmia, which is sometimes immense. A moderate degree of burning pain is felt for twenty minutes or two hours after the application. Sores never result from the burning, and not once in twenty strokes have I ever seen blisters arise. The epidermis is cast off dry in a few days, leaving a brownish stain which passes off wholly in a short time. The cautery can be used upon the face with perfect safety. I have made use of this most valuable means in women, and children 13 years old, without anæsthetics. The disagreeable ideas connected with the words "burning" and "cautery," in the minds of physicians and of patients, are the barrier to the more general use of the platinum cautery.

Setons have so much gone out of fashion that I need hardly stop to enter a protest against their use. It is very doubtful if a suppurating sore produces more irritation than the cautery or blisters, and there are grave objections to using setons.

Blisters are invaluable means of producing counter-irritation. Let me ask you to use them in such a way as not to produce suppuration; repeat the blisters and heal the blebs as soon as possible. Great good is often obtained from a series of small blisters.

Dry cupping is beneficial in many spinal affections. The number of cups applied should be large—from 10 to 20. It is not necessary to use the cups immediately over the seat of the disease. Ten cups may be applied upon the back, and ten in front, with the same benefit as if all were applied behind.

It is a matter of doubt whether wet cups act better than, or in a different manner from, the dry. The degree of skin irritation produced by the process of wet cupping is certainly very much greater than in that of dry cupping; and it cannot be positively denied that the loss of blood is useful. In various inflammatory affections of the cerebral and spinal meninges, and in some functional disorders, wet cups are still used.

Sulphur baths do good by the irritation they produce upon the surface, rather than from any effect of the sulphur upon the system generally. These baths may be employed liquid or in the shape of vapor. For liquid sulphur baths, the sulphuret of potassium is dissolved in water, and the patient soaks himself awhile in the solution. A better application is obtained by vaporizing sulphur in a chamber into which steam is let in, the patient's head being kept out of the bath, of course. A stay of ten or twenty minutes in this atmosphere produces a great deal of cutaneous irritation, which, in time, leads to a decided desquamation. Some of the natural sulphur spring waters are also used for bathing purposes, but are much less effectual. In spinal diseases, particularly posterior spinal sclerosis (locomotor ataxia), series of such baths have done great good. They are also useful in lead poisoning. Many medicated baths likewise act by producing extensive skin irritation.

Class E.

Electricity.

We employ all three forms of electricity in medicine, Franklinism or statical electricity, Galvanism (or Voltaic electricity), and Faradism or induction electricity.

Any one of these forms may be used in the treatment of diseases of the nervous system in a rational or an empirical way.

The rational applications of electricity are to produce muscular contraction (passive exercises) and to affect the nerves of sensation (irritation, sedation).

What I may call the empirical use of electricity is when we attempt, by means of it, to modify the mode of activity of deeply placed organs, such as the brain, spinal cord, and the ganglia of the sympathetic.

It would be out of place for me to attempt, in a few words, to speak of the special application of electricity. A great deal has been written about this matter in the last few years, and I am glad to say that there are a few small books on the subject which I would urge you to study. I need only say that within certain limits, corresponding with our physiological knowledge, I have the greatest faith in the power of Faradism and Galvanism as remedial agents, and that I use them a good deal.

Class F.

Hygienic Means, etc.

The cases of nervous disease which are strictly speaking active, due to hyperæmia, or over-action of the nervous centres, I regard as being exceedingly rare. Consequently, I regard the immense majority of cases as requiring a supporting diet and such hygiene as shall tend to improve nutrition.

There are very many points to be considered in this connection.

In the first place, many paralytics suffer from slow digestion and constipation. The diet of such patients should consist of such articles of food as leave little detritus, as meats, fish, eggs, milk, and fats. Vegetables and starchy or sweet articles should be allowed sparingly.

In the second place, the bladder in many cases (spinal palsies) requires to be emptied by means of the catheter. In such cases you cannot exercise too much gentleness and care in introducing the instrument, for fear of setting up cystitis, or of aggravating one already present.

Thirdly: In many spinal cases there is immensely exaggerated reflex activity of the spinal centres; spinal epilepsy is set up by the contact of the bed-clothes, your hand, etc., with the palsied limbs; and an overloaded bowel brings about attacks which seem spontaneous. By strict orders to the nurse and by the help of mechanical contrivance you can reduce these spasms to a minimum. If one occur, recollect that you can stop it by forcibly flexing one or both great toes, as indicated by Brown-Séquard.

Fourthly: I would ask you always to bear in mind that bed-ridden paralytics are peculiarly liable to fatal attacks of bronchitis, broncho-pneumonia, and pneumonic phthisis. Remembering this, you will give directions to obviate all that which might expose your patients to such chest complications.

Fifthly: Inasmuch as bed-sores are likely to occur among the complications of nervous diseases, a few words may be added to what has already been said concerning their prophylaxis.

It is important to make every piece of clothing beneath the patient smooth. Consequently, a pretty

hard mattress or water-bed is the best for them to lie upon. Special care is to be taken that the under-sheet does not get wrinkled and drawn into folds; its ends may be fastened down by tapes. The shirt worn by the patient should be kept smooth under him, and perfect cleanliness must be enforced. Special attention to these apparently small matters will in most cases be sufficient to prevent the formation of eschars.

In case a bed-sore has formed, the best course to pursue is to clean away all necrosed skin and connective tissue (tow-like shreds) by means of forceps and scissors, and then to use the ice and poultice treatment as above detailed. When healthy granulations spring up, ice poultices are still useful once or twice a day, to be succeeded by ointments, or adhesive plaster strapping.

Sixthly: In the matter of coffee, alcoholic drinks and tobacco. You will hear physicians asking their patients to give up the use of these articles, simply because they have a disease of the nervous system. I am afraid, gentlemen, that this is very illogical. For my own part I do not proscribe these luxuries unless there is evidence that their use has had something to do with the development of the morbid state. Usually I do not at all interfere with the use of coffee, and ask that a less quantity of alcoholic drinks and tobacco should be used. The worry and nervousness consequent upon the giving up of an established habit is worse for the patient, in my opinion, than the moderate use of the above-named articles.

Let me close this rather fragmentary lecture, by calling your attention to something which is not wholly extra-medical. I allude to the care of your patients' spirit—their emotions and fancies, if you will. Never let *alarm* be one of your medicaments. If necessary, in order to bring about the reform of bad habits, lay the picture of consequences before your patient truthfully, but not in the language of exaggeration. Even in hysterical cases you need not be so frank as to hurt your patient's feeling: it will often do if her relatives know precisely what you think of the value of the symptoms. In cases of mental disorder, pray do not forget that even very maniacal or melancholic patients attend to and remember all your words and actions, and will treasure any kind and careful behavior of yours, as well as bitterly recall any unkind or hasty phrases and acts. As a general therapeutic rule, I would have you be as anxious to avoid wounding the sensibilities of your poor or wealthy patients as of injuring their tissues.

NEW METHOD OF SUPPRESSING HEMORRHAGE DURING OPERATIONS WITHIN THE MOUTH.—In doing operations in the mouth, as staphylorraphy and uranoplasty, the surgeon is met by two especial sources of annoyance. First, the impracticability of both anæsthetizer and operator working simultaneously necessitates the loss of much time; and second, the sponging required by the usually abundant hemorrhage in these operations, causes frequent and annoying interruptions. Thus the operator gets but a relatively small portion of time in which to use his instruments. Prof. Andrews, of the Chicago Medical College, recommends, to obviate these disadvantages, that after having etherized the patient in the ordinary manner, the cone be exchanged for the spray apparatus, which is filled with ether. He claims that the use of this does not interfere with the operator's work; that the cold produced by directing the spray upon any particular part represses the tendency to hemorrhage, and, moreover, that the patient's inhalation of the vapor thus supplied adequately sustains the state of general anæsthesia.—*The Medical Examiner*, March 15.

Original Communications.

A SIMPLE METHOD OF REDUCING THE DISLOCATION OF THE FOREARM BACKWARDS.

BY ALEX. MURRAY, M.D.,

NEW YORK.

JAMES JOHNSON, aged 36 years, a blacksmith, is a large, healthy, muscular man. On the 8th of March, 1874, while driving a horse and wagon through Tenth street, he was thrown with violence to the ground and sustained a dislocation of the elbow-joint. He stated that when he fell he instinctively extended his arms forwards to save his head and face from injury, and believes he received the force of the fall on the palm of the right hand. His companion, who was riding in the wagon with him, was also thrown out, and fell directly against the injured arm, which was probably more directly the cause of the dislocation than the violence of his own fall. On recovering himself he found the joint nearly immovable, and was unable either to straighten it or bend it to a right angle. Previous to his visit to me, his friends had made several ineffectual attempts to reduce the luxation. I saw the man about four hours after the receipt of the injury, holding with the sound hand the fingers of the dislocated arm, to prevent any motion of the limb.

On examination, I found considerable swelling around the joint, shortening of the forearm, the olecranon projecting nearly two inches backwards and upwards—in short, a complete dislocation of the ulna and radius backwards.

The first case which came under observation for treatment by the method I shall presently describe, was in June, 1854; and was that of a man named Elliott, a mechanist, residing at Eighth street near Avenue C, an employé at the "Novelty Iron Works." He was an athlete, a powerful, muscular individual about thirty years of age. He had been on a drunken frolic for several days, and from the effects of his debauch and a few falls, had lain in a sort of stupor for three days altogether unconscious of the injury to his elbow-joint. On the fifth day after the occurrence of the accident, two physicians were engaged for nearly an hour in endeavoring by the use of pulleys, etc., to reduce a luxation of the forearm backwards. They were about sending the man to Bellevue Hospital for treatment, when my assistance was requested. We could not by any argument induce our patient to submit to etherization. I requested the man to stand up, and asked him if he would not take a little good brandy, and with a strict injunction that he should not drink it until such time as I should give him permission. My object by this little diplomacy was to withdraw his attention directly from the nature of his injury and the result which I was desirous of accomplishing.

I took my position at the outside of the dislocated arm, and placed the palm of my right hand to the palm of his left, dove-tailing my fingers between each of his fingers. In this way I had secured a firm hold to make extension. I then placed my elbow as a fulcrum and for counter-extension on the forearm in front and against the lower end of the humerus, and by a steady pressure downwards and backwards, and at the same time flexing the forearm towards the shoulder, I caused the luxated bones in a few moments to slip into their natural place.

I am not aware that this mode of reducing luxation of the elbow-joint has been adopted by any other physician, nor do I find any reference to it in our works on surgery.

Sir Astley Cooper recommended placing the knee between the arm and forearm (bend of the elbow), and by forcible flexion of the latter reduce the dislocation. This method suggested the one I have already detailed and practically tested in a few cases.

The incomplete or lateral dislocation, with or without fracture of the olecranon, can also be reduced in the same manner. The advantages of the above method are, that we have a ready means at command to make extension, counter-extension, also a fulcrum and leverage power; all of these aids can be brought into harmonious action at the same moment, to overcome the muscular resistance which opposes the reduction of the luxation. From its simplicity and easy execution we can reduce a dislocation of the ulna and radius backwards in two or three minutes, without the assistance of a second person, or of anæsthetics or pulleys. Although the reduction of this form of luxation is not generally attended with much difficulty, yet we do occasionally meet with cases which give considerable trouble.

I have met with six cases of complete dislocation of the forearm simply backwards; two of these were in school-boys, aged twelve and fourteen years respectively, and four in adults. Five were reduced by the method I have already described, and one in the manner recommended by Sir A. Cooper.

If the injured individual should be too weak, or unable to stand erect, he should be seated sideways on a chair, and made to grasp its back firmly with the sound arm, while the surgeon takes his position at the side of the injured limb parallel to the patient.

239 E. 10th Street.

A CASE OF PUERPERAL CONVULSIONS TREATED BY HYPODERMIC INJECTIONS OF MORPHIA.

By G. O. MORRISON-FISET, M.D.,

LATE HOUSE PHYSICIAN IN CHARITY HOSPITAL AND RESIDENT PHYSICIAN OF THE SMALL-POX AND FEVER HOSPITALS, NEW YORK.

Various hypotheses have been advanced by different authorities on the probable poison giving rise to the series of symptoms that are witnessed in the course of Bright's disease, and sometimes in the puerperal condition.*

If we accept the views of Frerichs, who says that carbonate of ammonia is the active poison, the result of decomposition of urea (which is retained in the blood) by the action of a ferment, or that urea itself is the agent producing the mischief, we agree to the action of a poison on the system, expending its force upon the two great nerve-centres, the brain and spinal cord. The channels through which that poison is to be eliminated are, the skin, intestines, and kidneys. The production of diaphoresis and catharsis has been recommended, to the exclusion of diuresis, by some of the best authorities upon this important subject. It is argued that the kidneys, being in an inflammatory state, should not be overtaxed, but that the morbid matter present in the blood should be eliminated by the skin and intestines. However, mild diuretics, *e. g.*, digitalis and the bitartrate of potash, have been administered with good results.

One of the best diaphoretics at our disposal is the active principle of opium—morphia—administered hypodermically. Yet not so many years ago, opium was considered a very dangerous drug to use in the treatment of acute albuminuria. Tanner, in connection with the treatment of uræmia, speaks thus: "The practitioner must carefully avoid the use of calomel; for even one or two moderate doses may develop mercurial ptyalism in cases of renal disease. So also opium is generally objectionable; although on the principle of selecting the lesser of the two evils, I have not hesitated to resort to it when there has been great irritability and sleeplessness."*

Professor Loomis, of the University of New York, has recently written an article, which was published in The Medical Record, relating a number of cases of uræmic convulsions treated by hypodermic injections of Magendie's solution of the sulphate of morphia and the internal administration of infusion of digitalis. The cases occurred in his own and in the practice of others; the results obtained were favorable in the majority of the cases thus treated. If opium is admissible in the treatment of uræmic convulsions due to organic disease of the kidneys, it is none the less in the treatment of the convulsions of parturition, which are due to an active congestion of the same organs, caused by pressure of the gravid uterus. The nerve-centres are irritated by the same poison in both instances; therefore the same remedies should be applied.

Always bearing in mind that the removal of the predisposing cause (which is the child) is indicated, we should, nevertheless, endeavor to eliminate the urea during our operative procedure, thereby controlling its virulent action upon the nervous system, manifested by a series of spasmodic contractions.

The frequency of the convulsions should be our guide in the administration of the drug.

I venture to predict that, before many years have elapsed, the treatment of uræmic convulsions by this method will be the acknowledged practice; and that when they occur during the act of parturition (provided uræmia is the only complication present), the employment of this valuable drug, as indicated, will be successful, without hastening that process which, under ordinary circumstances, we trust to nature.

This mode of treating puerperal convulsions I have tried in the following case, while in charge of the obstetrical wards of Charity Hospital:

Bridget W., single, æt., 24; admitted to ward 12, May 19, 1873. The patient was a primipara, and menstruated for the last time in the month of September. The pelvis was found to be normal in every respect. She was taken with pains at 10 A.M., August 21. I was called to see her on the next day at 12 o'clock, and found that the os was just beginning to dilate; at four, it was dilated to about half of its extent; the fœtal heart could be heard to the left of the umbilicus. At eight o'clock, I was summoned in all haste to the patient, and found her in a convulsion which lasted about five minutes. She having regained her consciousness while I succeeded in introducing a flexible catheter, through which only a few drops of urine flowed, but not in sufficient quantity for me to test. I therefore left the catheter in the urethra, hoping that I should shortly obtain enough urine for that purpose.

The spasms were tonic, and affected the whole body. The pupils were dilated, and frothy mucus issuing from

* Traube believes that the so-called uræmic symptoms are the result of cerebral anæmia, due to œdema of the brain. Niemeyer agrees with him to a limited degree.

* Tanner's Practice of Medicine, page 48.

her mouth. Her skin was dry. Dr. W. E. Ford, of the house staff, was called in consultation, and we administered ten minims of Magendie's solution of the sulphate of morphia. The nurse was ordered to keep the patient thoroughly covered with a blanket, to encourage diaphoresis. At a quarter to nine the patient was in a profuse perspiration, which continued for a few hours.

The uterine contractions (inertia uteri) were feeble and not frequent. At one o'clock the next morning (August 23) no urine had yet been obtained. The patient was made to lie on her side (in order to relieve the pressure upon the ureters caused by the uterus) and the catheter was introduced. About one ounce of a dark, smoky-colored urine was drawn off. This was tested by heat and alcohol, and found to contain albumen in large quantity. No convulsions had recurred up to this time. At nine o'clock the membranes ruptured, the os was then fully dilated, the head presenting, and in the left occipito-iliac anterior position—the uterine contractions being feeble and irregular, and the head engaged in the excavation. At four o'clock the labor had made but little progress, though the contractions occurred oftener and were more powerful. I then called a consultation of all the members of the house staff at eight o'clock in the evening. The vagina was hot and dry, the pulse frequent and small. Chloroform was administered, and I applied the forceps; after making traction for about twenty minutes the child's head was delivered. The inertia uteri was now complete, and traction was made with one finger of the right hand in the child's left axilla, and the left hand upon its head; at the end of ten minutes the body was delivered. I could not detect any heart sounds in the child; however, artificial respiration was kept up for a long time after its delivery, during which period no signs of life were manifested. One drachm of the fluid extract of ergot was administered to the mother, and ounce-doses of whiskey given every forty minutes. At ten o'clock the placenta was still firmly attached, and the inertia complete; hemorrhage now occurring, the hand was passed into the uterus, and the placenta was extricated, followed by the removal of all clots of blood. Ergot was given, and ice applied over the abdomen, at the same time kneading the uterus, which now began to contract, and very little blood was lost. Upon examination the placenta and membranes were found to be intact. No return of the convulsions has taken place, the patient having been watched constantly. One hour later no hemorrhage had occurred. The pulse was quick and feeble, I therefore ordered half-ounce doses of whiskey to be given every hour or two, during the remainder of the night; but if the patient was sleeping, to give one ounce every three hours; I then gave another hypodermic (ten minims) injection of Magendie's solution.

The next morning I found that she had slept well during the night; her pulse was now firm, but still rapid. I ordered the whiskey to be continued as before, and her diet to consist of milk and beef-tea, given at intervals in small quantities. I also prescribed eight grains of sulphate of cinchonia every three hours. At seven o'clock in the evening, the patient complained of soreness of the abdomen, but no well-defined pain; she had vomited frequently during the day. Lime-water added to her milk was prescribed. The legs were still œdematous, and the patient was uncertain as to the amount of urine passed by her. I consequently prescribed the infusion of digitalis in two-drachm doses every four hours. On the morning of the 25th, I found that the mucous membrane of the lower part of the vagina was in a sloughing condition. Her pulse was 108 and full; she could now retain her milk, and had had no secondary hemorrhage nor convulsions. A poultice of equal parts of animal charcoal and linseed, saturated with a solution of carbolic acid (ʒ iij. to Oi.) was ordered to be applied to the vulva three times a day. The sphincter vesicæ was paralyzed from the prolonged and difficult labor, and the urine dribbled away, consequently the catheter had to be used frequently. On the last day of August, I saw the patient for the last time; she was fast improving, and could now pass her urine without the aid of the catheter. Her pulse was regular and full. The slough having separated from the vagina, a healthy granulating ulcer remained, which continued to improve under appropriate treatment.

CASE OF RETENTION OF URINE FROM ENLARGED PROSTATE — ASPIRATOR USED NINETEEN TIMES.

By JAMES A. HALL, M.D.,

ELMIRA, N. Y.

Mr. T., of Schuyler county, aged 78 years, of temperate habits, and an otherwise healthy man, had been suffering for some time from enlarged prostate, and after having, as he thought, "taken a little cold," found on rising, March 21st, that he was unable to evacuate the bladder, and the retention continuing, in the afternoon he sent for his physician, Dr. J. W. Thompson, of Watkins. Dr. T., who had attended the patient during a similar attack a little more than a month previous, and was at that time able to relieve him by the use of the catheter, made persistent and repeated, but unsuccessful, attempts to enter the bladder, using the common silver catheter, the gum elastic, and finally Squire's vertebrated instrument, which had been most readily introduced on the former occasion. Twenty-four hours later I saw the patient, and became associated with the doctor in the care of the case. Attempts were again made to introduce catheters, but with negative results. The gland, by examination per rectum, was found to be very much swollen—in size larger than a hen's egg—and exceedingly sensitive. Under these circumstances I proposed to use the aspirator, and early the following morning (March 23d), 48 ounces of highly colored, strongly ammoniacal urine were drawn by aspiration, and the patient greatly relieved. During the four days following, the patient, not suffering severely from the distended bladder, and being several miles out of town, was visited but once a day, and an average of 46 ounces of urine was drawn by aspiration on each occasion; but on the fourth day, on visiting the patient, the secretion of urine seemed to have increased, the bladder was very much distended—the summit reaching nearly to the umbilicus—the patient was suffering intense pain, and the amount of urine drawn was 59 ounces. During the next three days, in order to prevent the extreme distention of the bladder, and the suffering consequent upon that distention, aspiration was performed once in sixteen hours instead of once in twenty-four hours, when, the urine diminishing in quantity, one aspiration in twenty-four hours was deemed sufficient.

Aspiration was first performed on the 23d of March, and was continued until April 8th, or for a period of 17 days, the number of aspirations being 19. Every three or four days attempts were gently made to intro-

duce the catheters, but were unsuccessful until April 8th, when Dr. Squire's vertebrated catheter was introduced with no difficulty. The urine flowed readily, and from that time till the present writing (May 12th), there has been no difficulty in the introduction of the catheter, and since April 17th that operation has been intrusted to the son of the patient.

In using the aspirator the needle was introduced near the median line, and about 1¼ inches above the pubes; and to show how insignificant the wounds were, it is sufficient to say that the entire nineteen punctures occupied a space less than three-fourths of an inch in diameter, without the slightest inconvenience being felt from them.

The character of the water drawn was the same as at first, till March 29th, when 46 ounces were removed, the last eight of which flowed very slowly, settled immediately to the bottom of the receiver, and was a thick, grayish-colored, mucous deposit, with a very offensive smell. The day following, this deposit was much less in quantity, and passed away entirely in about three days, and with it the high color and strong ammoniacal odor; and from that time on the urine was normal. The first drawn by the *catheter* had all the appearance of healthy urine, and flowed readily, there being no "thick tenacious mucus" to interfere, as troubled Dr. Spier in his case, reported in THE RECORD, March 2d.

That trouble can be guarded against by placing the patient, when operating, *upon the side, with the abdomen as dependent as possible.* When lying upon the back, as Dr. Spier says, "the upper portion of the urine is usually drawn off, and there is a constant accumulation or deposit of mucus and salts at the bottom of the bladder." The only way to prevent this deposit is to *empty the bladder completely*, and this is a hard matter to accomplish with the patient lying upon his back. It was not until I recognized this fact, and changed the position of the patient, that the mucus was drawn by the aspirator and the bladder completely emptied in this case. The force of gravity will keep the bladder nearest the spinal column, and as it is being emptied by aspiration of its contents, and contracts, the weight of water remaining still pressing the posterior wall of the bladder towards the sacrum, the anterior wall is drawn backward and away from the abdominal parietes, and eventually it slips off the end of the aspirator needle; the water ceases to flow, and the operator imagines that the bladder is empty. Dr. Spier's trouble may have been caused by a partial emptying only of the bladder; for while the distended organ reached nearly to the umbilicus, he only removed, at the most, 35 ounces of water, while in the present case, the fundus of the bladder not reaching the umbilicus, 59 ounces were drawn at one time, as before mentioned. Now, if the patient be placed upon his side, inclined as far forward, or as much upon his face as possible, the bladder will, by the force of gravity, be held in apposition with the abdominal parietes, and, instead of receding from the point of the needle as it is emptied, it still grasps it, while the water gravitates to the needle's eye; the bladder is completely emptied, no water remaining to undergo decomposition; there is no deposit of mucus and salts, and no necessity for injections and washings.

In this case, by using the aspirator the prostate—not provoked and irritated by constant attempts at catheterization—was allowed a rest, the acute inflammation subsided, and with it the excessive swelling, till at last the catheter could be easily introduced.

I have reported the case as one of general interest, to call special attention to the *importance of posi-* hen emptying the bladder with the aspirator.

A CASE OF PARASITIC GROWTH IN THE EXTERNAL AUDITORY CANAL.

By W. SHAW BOWEN, M.D.,

OPHTHALMIC AND AURAL SURGEON TO THE HARTFORD HOSPITAL.

MR. E., æt. 29, in delicate health. Has had a discharge from both ears for twenty years, the result of scarlatina; has been advised by physicians that "a discharge from the ears is healthy," and that "it is unsafe to tamper with it." First seen January 10th, 1874. Hearing distance, watch, A. D. $\frac{2}{60}$; A. S. $\frac{3}{60}$. Tuning-fork loudest in right ear. Slight tinnitus at times in both. Discharge subject to exacerbations. There have been no mastoid complications, and but little pain until within a few weeks. Has a bad catarrh of the pharynx and nasal passages of the proliferous type. Eustachian tubes pervious and somewhat relaxed. The left meatus and canal normal. Membrana tympani and ossicles gone; the former represented by a narrow thickened annular rim; the periosteum of the tympanic cavity inflamed and bathed in pus; a small granular mass sprouting from the promontory. The right canal was narrowed so that only the smallest sized speculum of Gruber could be introduced. At the inner fourth the canal was blocked by a whitish mass, at first supposed to be a plug of cotton, the patient being in the habit of using such to control the discharges. As a thorough syringing failed to detach this, a fragment was removed with Wilder's forceps. A parasitic growth was suspected, and repeated efforts with the forceps finally dislodged the entire mass, leaving the characteristic red and glistening dermoid layer of the canal, exceedingly painful on contact with the blades of the forceps. The denuded surface was swabbed with a solution of calcaria hypochlorosa, gr. iij. ad f ℥ j., as advised by Wreden, and the canals were syringed at frequent intervals for several days. There was no return of the growth. Its seat remained sensitive for several days, and at times was irritated by the saturated solution of nitrate of silver used to check this purulent discharge from the drum. The removed mass had the appearance of yellowish-white epidermic scales, of a cetaceous consistence, and under the microscope was determined to be a specimen of *Aspergillus Flavescens.* The right membrana tympani and the ossicles were absent, and several fungoid granulations were attached to the posterior wall of the cavity. The discharge was checked in about ten days. Hearing distance the same as when first seen. There has been no return of the discharge, or of any inflammatoy symptoms.

HARTFORD, CONN., 15th March, 1874.

INTERMITTING LAMENESS.—A very curious fact has been described by Dr. Sabourin, viz., that lameness may ensue from obliteration of arteries. Horse lameness is so obscure that any light on the subject is desirable. It is not, however, confined to the horse, but extends also to man. The cause observed by him is owing to obliteration of the aorta and iliac arteries. Commonly, after previous good health, the subject begins to limp in one or two limbs; to tremble, and finally to fall. Rest is commonly productive of relief. MM. Bouley and Goubaux long ago pointed out the nature of the affection in horses, while M. Charcot first called attention to its existence, comparatively rare, in man. Arteritis has been supposed to be the occasion of its existence in horses, owing to the violent efforts they have to make, and embolism in man.

Reports of Hospitals.

BROOKLYN CITY HOSPITAL.

Reports of Practice and Peculiarities in Treatment.

INHALATION OF CHLOROFORM IN A CASE OF STRYCHNINE POISONING.

PATIENT took five (5) grains of strychnine with suicidal intent.

Before admission to the hospital he was given twenty grains of sulphate of zinc with effect. He had had repeated convulsions, and, while being taken from the ambulance, was seized with one of tetanic form, which plainly showed strychnine poisoning. Every muscle was rigid, and tetanus complete. Opisthotonus, irregularity of pulse, varying from 120 to 140 in the minute, with all the accompanying symptoms, were noticeable.

He was immediately placed under the influence of chloroform. The convulsions ceased from the commencement of the anæsthesia, under which the patient was fully kept for three (3) hours. The chloroform was then removed, but the patient did not awake until six (6) hours afterwards—a case of recovery.

CHRONIC DIARRHŒA.

In those cases where the epithelium is stripped from the tongue, and the patient presents the cachexia of the disease, good results have been obtained by the administration of pulv. ipecac, in twelve-grain doses, three (3) times daily, given mid-time between meals to prevent emesis.

This is continued until the stools are of a perfectly serous nature, when the ipecac is discontinued, and

Zinci oxide.....gr. iv.
Ext. quassia.....gr. vj.

in capsule given three times daily.

Guarana in powder has been used in similar cases with apparently very good cures; but as it is impossible to keep trace of the patient, the permanency of the cure is not established.

PNEUMONIA.

The method of treatment is that generally employed, viz., quinine and stimulants; but as a marked feature in a fair proportion of the cases is the entire absence of expectoration, or, if present, the rusty color is not observable.

An interesting point in the history of a fatal case was the finding at post-mortem examination of innumerable hepatic abscesses and cicatrices of old ones. Prior to this attack of double pneumonia he could not account for a day's sickness.

PECULIAR INJURY OF FINGER.

A somewhat peculiar case was brought to our notice of a machinist, who, while at work, had the end of his index-finger caught in the machinery.

The ungual phalanx was torn off, and attached to it was thirteen inches of the flexor tendon, and muscular connection. No inflammation of arm ensued.

ERYSIPELAS.

As a local application in erysipelas, the following has proved as efficacious and *cheaper* than the lead and opium wash:—

Plumbi acetat.,
Magn. carb.,
Gum camphor.....ää ℥i.
Aquæ..... Oj.

NIGHT SWEATS.

For night sweats of phthisis the combination of extract of belladonnæ with oxide of zinc:—

Belladonnæ ext..... gr. ¼
Zinci oxide..... gr. iv.

is found acceptible.

EXCISION OF PORTION OF STERNUM.

This is a case where the greater portion of the manubrium was excised, by Dr. Spier, for necrosis.

The result of the operation was very satisfactory.

RUPTURE OF LUNG.

Patient, seventeen years of age, was suddenly caught, and crushed between two cars, resulting in fracture of neck of humerus, and death from emphysema.

Autopsy revealed rupture of left lung through apex, four and a half inches in depth. No fractured rib to cause it; but the lungs being filled, and in the sudden pressure the air was not able to escape by the natural passage, a rupture was the consequence.

COMPOUND DISLOCATION OF ANKLE-JOINT.

Injury was received by patient stepping from car—dislocation outwards.

There was considerable laceration of tissues, malleolus of tibia projecting.

Reduction was immediately performed, edges of wound brought together, and sealed with styptic cotton and collodion. A somewhat severe inflammation ensued, but patient is now progressing favorably.

BELLEVUE HOSPITAL.

A CURIOUS CASE OF HEMIPLEGIA.

THE chief feature of interest in a case of hemiplegia under observation related to the cause of the trouble. The history of the case was as follows:

Mrs. L——, æt 50, domestic, was admitted to the Hospital, December 10, 1873. Being unable to speak, the history was obtained from her friends; she had been a healthy woman, and there was no previous history of rheumatism. During the forenoon of the day upon which she was admitted, she attended to her work, but about 12 o'clock it was thought, judging from her actions, that she was not feeling usually well. It was noticed that she had difficulty in grasping the bail of a kettle she wished to remove. She was advised to sit down and rest for a while, which she did. Half an hour afterwards she fell upon the floor speechless, and it was at once discovered that she was partially paralyzed. She was immediately conveyed to the hospital. Sensation and motion were partially paralyzed over the entire right side. Temperature of the right side of the body was somewhat lowered. Pupils equally dilated. Orbicularis muscles normal in the performance of their function. Angle of mouth dropped. She was unable to protrude the tongue to its full extent, and, when protruded, it turned to the right. At no time had there been loss of consciousness. Upon admission all the muscles of the body seemed rigid, but those of the paralyzed side soon became relaxed, and remained in that condition. Muscular contractility intact. Old cardiac murmur, aortic obstructive, present.

Dec. 12.—There was slight motion upon the affected side. Unable to articulate. Understands perfectly. Paralysis of motion slightly increased. Subsequent to admission, her pulse, respiration, and temperature were as follows: Dec. 10, P. 80, R. 18, T. 100¼°; Dec. 12, P. 84, R. 21, T. 101½°; Dec. 13, P. 88, R. 20, T. 100½°;

Dec. 14, P. 78, R. 26, T. 99°; evening, T. 98°+; Dec. 15, P. 80, R. 14, T. 99¼°; evening, T. 99¼°; Dec. 16, P. 68, T. 98¼°; evening, P. 64, T. 98°+; Dec. 17, P. 76, T. 98°; evening, T. 100¼°; Dec. 18, T. 99°+.

This completes the history of the case; the remaining organs were found to be in a healthy condition.

The question was, what was the cause of the hemiplegia in this case? In the first place, it was altogether probable that the morbid condition, which stood in the relation of cause for the paralysis, was within the cranial cavity. The previous good health of the patient, and the suddenness of the attack, reasonably permit narrowing the grounds of disputation down to three causes, namely, thrombosis, embolism, and cerebral hemorrhage. These three causes were carefully studied by both the house staff and the visiting physicians. The doctors disagreed.

In favor of thrombosis of an artery was the fact that there was certainly an interval of half an hour between the development of the first symptoms and the time when the patient fell upon the floor. The time, however, was regarded as being a little too short for the development of thrombosis.

In favor of embolism was the fact that the muscles were relaxed almost from the outset; that the lesion was upon the left side of the brain; that there was no loss of consciousness; and that there was cardiac disease. The extensive loss of power was against embolism. The slow development of the paralysis was not necessarily against embolism, for a small embolus may have been caught in the artery and coagulation occurred around it, which would require a little time for its formation; and one of the visiting physicians expressed the opinion that he believed that it would require more than half an hour to complete such a coagulation.

Progress of Medical Science.

An Overlooked Source of Blood-Supply, for Transfusion in Post-Partum Hemorrhage.—Dr. William Highmore, writing to *The Lancet*, calls attention to the use, for purposes of transfusion, of the blood which has escaped from the open uterine vessels. By collecting and defibrinating this blood, and warming it to the requisite temperature, it may again be returned to the circulation of the patient, and enable the attendant to save a life in cases where an equally good source from which to obtain a supply of blood does not exist.

Experiments upon the Human Brain.—In *The American Journal of the Medical Sciences* for April Prof. Bartholow reports some "experimental observations of the functions of the human brain." The experiments were made upon a girl who had lost a portion of the cranium over a small space near the vertex, in consequence of an epithelioma of the scalp. For about two inches the dura mater was exposed and the pulsations of the brain visible. It was desired to ascertain the effect of irritation of the dura mater and cerebral substance through local faradization, galvanism, etc. Five needles, guarded to near their points, used as electrodes, were thrust into the dura mater and brain-substance of either hemisphere. When the needles were passed into the dura mater no evidence of sensibility appeared. Faradization of the dura mater of one side caused muscular contractions of the opposite side, especially of the extensors of the extremities. The faradic reactions of the posterior lobes was tested by thrusting one needle into the brain while the other was placed in its vicinity in contact with the dura mater. A weak electric current caused painful tingling in the opposite extremities, dilatation of the pupils, and muscular contractions of the opposite side. The strength of the current being increased, convulsive action upon the opposite side ensued, followed by frothing at the mouth, stertorous breathing and coma. The attack lasted twenty minutes.

The galvanic reaction of the posterior lobes was to have been tested, but rapid extension of the disease to the left hemisphere, with grave cerebral symptoms, precluded continuance of the experiments. The case soon resulted fatally. At the *post-mortem* no especial injury to the brain matter appeared to have been directly due to the needle-punctures. Their course was marked by lines of diffluent cerebral matter, but the surrounding tissue did not seem to have been affected by the lesion.

Dr. Levis's case of Aneurism treated by the Introduction of Horse-hairs.—At a meeting of the Pathological Society of Philadelphia, Dr. Longstreth reported the results of the autopsic examination of the above case. The aneurism was of the right subclavian artery. Dr. Levis had operated by introducing horse-hairs through a fine canula into the aneurismal sac. Twenty-four feet and nine inches of hair were thus introduced without difficulty, and without causing any local irritation. The patient died with symptoms of engorgement and pressure on the upper lobe of the right lung. At the *post-mortem* examination the artery was found dilated both upwards and downwards. The upper dilatation was about one inch and a half in diameter, and was filled with a firm, white, fibrinous clot. The lower dilatation had an oval orifice of about one inch in its longest diameter, and was also partially filled with a fibrinous clot. The lung was found compressed inwards and forwards, consolidated above and collapsed below, and behind it was a large mass of dark clotted blood which extended beyond the line of the rib as far down as the sixth rib, and could be felt as a fluctuating mass underneath the pectoral muscles. The first two ribs had disappeared. From the third, fourth and fifth ribs, pleura and periosteum had been stripped, which latter, together with intercostal muscles, were crowded before the clotted blood into the axillary space. The intercostal arteries were lacerated. At the upper part of this soft thoracic clot a dense white clot was found attached around the lower aneurismal opening. In the outer portion of this clot the hair was found embedded. The walls of the artery could not be traced beyond an inch from the arterial orifice, the aneurismal wall in this situation having been alone supplied by the condensed lung tissue, together with the muscles at the apex of the thoracic cavity. It was therefore a diffuse aneurism. It was ascertained, however, that the soft clot in the thorax did not communicate with the aneurismal cavity above. It appeared that after the operation the position of the clots formed in the sac directed the full force of the blood-current upon the proximal portion of the lower dilatation, but its force being here opposed only by the yielding tissue of the lung and thoracic muscles, the walls of the cavity gradually receded, stripping the ribs and lacerating the intercostal arteries. To hemorrhage from these latter is ascribed the origin of the soft clot within the thorax.

Dr. L. is of the opinion that had the aneurismal sac been supported by the walls of the vessel, the formation of a firm laminated clot might have been expected, and consequent cure of the aneurism.—*Phila. Med. Times*, No. 126.

TREATMENT OF PARAPHYMOSIS.—M. Bardinet suggests the following simple mode of reducing a paraphymosis:—He passes between the prepuce and corona a blunt lever—the blunt end of an ordinary hair-pin answers well—one being placed in the upper, another at some nearly corresponding place beneath. The fingers are then used in drawing forward the prepuce by a sort of screwing movement, the hair-pins or other blunt instrument, such as the handle of an ordinary teaspoon, acting as a lever to slide the prepuce over.

PRESERVATION FROM HYDROPHOBIA.—At the meeting of the French Academy of Sciences on April 13th, M. Bouley laid before it a memoir by M. Bourrell, a veterinary surgeon of Paris, entitled "A Complete Treatise on Rabies in the Dog and Cat, with a Method of Preserving one's self against It." The means of preserving from rabies recommended by the author, consists in taking off the edge of the teeth of the animal with the aid of nippers or a file. (?) M. Bourrell had the daring to perform this operation of filing down the teeth of three dogs when they were in a condition of raging madness. Six dogs kept for experiment were then turned loose among the rabid animals, who attacked and bit them furiously, but without breaking the skin in any one of them. The dogs experimented on were watched during six months, and madness did not show itself in any one of the number. M. Bourrell, convinced that the blunted tooth of the dog could not penetrate through clothing, gave his hand, covered with a glove, to one of the mad dogs. "When," he says, "the dog released it the glove was intact, and the bite had only produced a deep impression." The same experiment repeated on dogs which were not rabid proved that the blunted tooth, however violent the effort of the muscles of the jaw, would not penetrate the skin of animals, and affected the human epidermis in very exceptional cases only.

EXTERNAL TREATMENT OF VARICOSE VEINS.—Dr. Livier says, in the *Tribune Médicale*, that he has for years treated such cases with success by swathing the leg in a flannel compress wet with a solution of chloride of iron in water, forty-five grains to the ounce, and then applying a roller bandage of flannel over it firmly for twenty-four hours. This is to be repeated daily for a week or two weeks, when the patient is or ought to be well.—*Med. Press & Cir.*

A CAUSE OF DEATH IN WHOOPING-COUGH.—M. du Castel says that death often supervenes in this disease from spasm of the glottis. He refers to Jaccoud's *Traité de Pathologie Interne*, where are described spasmodic accidents of greater or less gravity in whooping-cough, as the result of excitation more or less severe of the laryngeal nerve. According to M. du Castel, there is found on autopsy a cerebral lesion as the result of the asphyxia.—*Ibid.*

LEMON-JUICE AS A LOCAL APPLICATION IN DIPHTHERIA.—In a clinical lecture by M. Bucquoy, delivered at the Hôpital Cochin, he expressed his preference for lemon-juice as a local application to diphtheria, to acids, chlorate of potash, nitrate of silver, perchloride of iron, alum, or lime-water. He uses it by dipping a little plug of cotton-wool, twisted around a wire in the juice, and pressing it against the diseased surface four or five times daily.—*Jour. de Médicine.*

THE STRUCTURAL CHANGES IN GONORRHŒAL EPIDIDYMITIS.—Schepelern has had an opportunity of studying two cases of this form of disease in the acute stage. The patients died suddenly of other diseases. In one there had been an epididymitis of the left side, which had lasted eight days, and had followed urethritis. The urethra was found injected at its superior portion only. The left vas deferens was one-half thicker on the left side than on the right; its vessels were injected, in part dilated and tortuous; the lower extremity of the epididymis was swollen and infiltrated and fibrous, and in the anterior portion there was a collection of matter larger than a pea. The testicle itself was healthy. In the lower part of the tunica there was a small quantity of serous fluid, corresponding to the infiltrated inferior extremity of epididymis, and commencing adhesive inflammation with false membranes. Microscopical examination showed that there was catarrh of the vas deferens. In the second case the pathological changes were a collection of pus the size of a pea in the lower extremity of the epididymis and false membranes, and serous fluid in the cavity of the tunica. The purulent collections were regarded as abscesses of the connective tissue.—*Med. Chir. Rundschau.*, April, 1874.

ALBUMINURIA A SYMPTOM OF AN EPILEPTIC ATTACK.—According to Huppert, albuminuria is a constant concomitant of epileptic seizures. The urine which is passed three to four hours afterwards always contains a little albumen. Simple epileptic giddiness passes off without any albuminuria that is recognizable, while mild forms have a moderate amount. When attacks succeed each other rapidly, or the nervous affection lasts a long time, the renal trouble is proportionately well marked. Casts are usually not found after a light attack, but in advanced cases they are numerous. Red blood-corpuscles are seldom found, but seminal elements are relatively frequent. In the epileptiform apoplexies of paralytics the urine is albuminous, and often contains red corpuscles. This latter symptom is regarded by the author as indicating an essential difference in the pathological processes.—*Virchow's Archiv*, LIX. 3 and 4.

THE DANGER OF MIXING CHROMIC ACID WITH GLYCERINE.—In preparing mixtures of this kind, which have been so highly recommended for diseases of the mouth and throat, care should be taken not to add these reagents together too quickly, for it is said that the fluid may take fire and explode. There is no danger if the glycerine be added drop by drop, for then a little warmth only will be generated.—*Il Raccogl. Med., Memorabilien*, 2, 1874.

ARTICLES IN OUR EXCHANGES.

SYPHILOGRAPHY AND DERMATOLOGY.

The utility and necessity of revaccination. GIUNTOLI. *L'Imparziale*, April, 1874.

Report of the Milanese Committee for 1873 on animal vaccination. GRANCINI. *Ann. Univ. d. Med.*, March, 1874.

Investigations on lupus. FRIEDLÄNDER. *Virchow's Archiv*, April, 1874.

Case of syphilitic meningitis, with remarks on syphilis of the central organs. BRUBERGER. *Ibid.*, May, 1874.

Vaccine lymph, its organization and preservation. SCHENK. *Deutsche Vierteljahrsschr. f. Oeffentl. Gesundheitspflege*, 1, 1874.

Black pigmentation of the skin in a new-born child. GREVE. *Allgemein. Med. Central Ztg.*

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Intestinal catarrh in infants. STAGE. *Ugeskrift for Laeger*, 1, 2, 3, 4, 1874.

Instantaneous death of puerperal women. SANTOPADRE. *Il Raccoglit. Med.*, March, 1874.

Anæsthesia in obstetrics. ROMILI. *Lo Sperimentale*, April, 1874.

Clinical considerations with regard to hydrocephalus. CHIARA. *Gazz. d. Clin.* (Torino), April, 1874.

Two new cases of infantile hepatic hyperæmia cured by ung. hydrarg. and belladonna. DU-JARDIN. *La Nuova Liguria Med.*, March, 1874.

Vaginal fistula and the operations for its cure. MIGLIORI. *La Gazz. Med. del. Calabria*, 1874.

OPHTHALMOLOGY AND OTOLOGY.

Theory of strabismus. E. HOUSEN. *Hospitals Tidende*, 12, 13, 1874.

Methods of operating for entropion in the clinics of Genoa. SECONDI. *Nuova Liguria Medica*, Feb., 1874.

Treatment of certain eye diseases by the induced current. SANTOPADRE. *Il Galvani*, Feb., 1874.

On the granulation tumor of the iris. HIRSCHBERG. *Virchow's Archiv*, April, 1874.

Aneurysma arterioso-venosum retinæ. MAGNUS. *Ibid.*

Tuberculosis of the middle ear in the pig, with remarks on the anatomy of the temporal bone of this animal. SCHÜTZ. *Virchow's Archiv*, April, 1874.

Two cases of pseudoplasms of the bulb. LINDNER. *Allgemein. Wien. Med. Ztg.*, 14, 1874.

NERVOUS DISEASES.

Report on nervous diseases. NAMIAS. *Giorn. Ven. d. Sci. Med.*, April, 1874.

Case of progressive muscular atrophy cured by electricity. BONADEL. *Il Galvani*, March, 1874.

Chloride of lime in spinal and basal paralyses. VESCOVO. *Gazz. Med. Ital. Lombard*, April, 1874.

Incomplete hemiplegia of fifteen years' duration cured by electricity. PETRONI. *Il Raccoglit. Med.*, March, 1874.

Cases cured by the use of electricity. MUCCI. *Ann. Univ. d. Med.*, March, 1874.

Franzensbad for diseases of the nervous system. MICHELSTAEDTER. *Allgemein. Med. Central Ztg.*, 33, 1874.

The alcoholic brain affections. KRAFFT-EBING. *Der Irrenfreund*, 2, 1874.

Insanity in consequence of injury to the head in difficult labors, as from the forceps. *Ibid.*

PATHOLOGY AND PRACTICE OF MEDICINE.

Quantitative changes in the urine in chronic diffuse nephritis. BUDDE. *Ugeskrift for Laeger*, 7, 1874.

Pathogenesis and therapeutics of uræmia. BUDDE. *Ibid.*, 8, 9, 10, 11, 1874.

An unsolved question in regard to tuberculosis. CARPANI. *Lo Sperimentale*, April, 1874.

Therapeutics of the iodide and bromide of mercury. BELLINI. *Lo Sperimentale*, April, 1874.

Treatment of epidemic diphtheria. ALVINO. *La Campana Medica*, 1, 1874.

Development of tissue resembling cartilage and of true bone in the penis of an adult. LENHOSSÉK. *Virchow's Archiv*, April, 1874.

Some observations made during the year 1873 on some cholera patients in the Allgemeine Krankenhaus in Hamburg. ERMAN. *Ibid.*

On the giant-celled sarcomata. VIRCHOW. *Ibid.*

Anatomical studies on typhus recurrens. PONFICK. *Ibid.*, May, 1874.

Rupture of the mucous membrane—a contribution to the pathology of the larynx. STOERCK. *Ibid.*

Cystic tumor on a female fœtus in the sixth month. NEUFFER. *Med. Corres.-blatt*, 11, 1874.

Treatment of chronic bronchial catarrh and asthma, and the action of the warm salt baths in these affections. RINTELN. *Allgemein. Med. Central Ztg.*, 28, 1874.

Sudden death from anæmia. PINTSCHOVIUS. *Ibid.*

Remarks on carcinoma of the breast. PODRASKI. *Allgemein. Wien. Med. Ztg.*, 14, 15, 16, 17, 18, 1874.

THE STATE MEDICAL SOCIETY OF NEW JERSEY held its 108th anniversary at the Mansion House, Long Branch, on Tuesday and Wednesday, May 26th and 27th. Dr. Thomason, of Monmouth, as President, delivered the opening address. His subject was Medical Truthfulness. He discussed the temptations to which the physician is subjected, either to play a part for impression on others or for concealment from the patient himself. Avarice, credulity, selfishness, vanity, and idleness often prompt to pretence. He claimed that it was due to science, to our profession, and to our patients to deal with them in integrity. The father of medicine in his aphorisms shows himself a teacher of morals not additionally but because he was a true physician, and the Hippocrated oath has in it the high tone which belongs to truthful science. The address was worthy of the occasion, and was listened to with much interest. Two sets of delegates appeared from the Hudson Co. Medical Society. The difficulty in that society, which has existed for three or four years, was, however, disposed of by a clear, full report from the Committee on Ethics, and the delegates from the Legal Society admitted. The session of Wednesday was chiefly occupied with the report of the Standing Committee. This consists of a résumé of the reports from each county society. Dr. Wickes, of Orange, the permanent chairman of the committee, collates and arranges so admirably, and by previous inquiries so well draws out facts, that this document is of very great value as presenting the prevalent experience of practice in the State. Three special inquiries were made the last year.

What is your experience in the use of chloral-hydrate?

What is your experience as to the value of hypodermic medication?

Have medical men by their habits of prescription aided and abetted the excessive use of alcohol?

Nearly all the county societies answer favorably as to the use of chloral, especially as a hypnotic, the dose generally being large. In the asylum it is greatly valued as a quieter. As a sedative to control inflammatory action it does not at all take the place of opiates.

Most of the counties reply in favor of the use of the hypodermic syringe, especially for morphine medication. No evil results are reported, while very many attest its value. We should like to have heard the question discussed as to whether it is to be preferred to stomachic prescription in cases where the stomach retains well.

As to alcohol, it was strongly affirmed that the evils arising through medical prescriptions are greatly overstated, both because there is a convenient excuse for inebriates and a favorite assumption with intemperate zealots in reform.

Dr. Schenck, of Canada, read a paper on the forceps, and Dr. Kipp, of Newark, treated ably "The Diseases of the Eye arising from Variola."

The meeting was an exceedingly pleasant one socially, and profitable professionally. Dr. Newman ably represented New York, and Dr. O. Leary, Rhode Island. The New Jersey Society is quite a model in the precision with which it despatches business, and its meetings are always satisfactory.

It had a larger number of counties represented this year than ever before, and the district societies are mostly in good working order. This speaks well for the *esprit de corps* of the profession in the State.

CROWDED COLUMNS.—In consequence of the space occupied by the Reports of Sections, a number of items are crowded out of our present issue.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, July 1, 1874.

THE SECTIONS OF THE AMERICAN MEDICAL ASSOCIATION.

THE meetings of the Sections of the American Medical Association were very well attended, and, as will be seen by the reports in this number, the subjects presented were in the main of practical interest. The arrangements for the meetings of these bodies were as near perfection as a well-organized system could make them, and, judging from what we saw, we believe ourselves safe in saying that nearly every member attended some of those sessions. Those of Surgery and Practical Medicine were the best patronized, for the obvious reason that the subjects naturally discussed in such meetings were calculated to interest a larger number of general practitioners. No more important topic than that of fractures, for instance, could be brought up before the Section on Surgery. It is, in fact, a subject in which every general practitioner is forced to become interested; but especially those who practise in the rural districts, and who for the most part are compelled to rely on self-help, or individual brains and practical common sense. The discussion on the paper of Dr. Sayre showed how much attention has been given to the matter by the active practitioners all over the country, and how ready they were to dispute the views of the author on the one hand, and confirm them on the other. The very independence of opinion in these respects would prove even to the casual observer the capabilities and intelligence of that class of medical men whom metropolitans are apt to speak of only as country practitioners. The same may be said for those gentlemen who were attracted to the meetings of the Section on Practical Medicine, although, with one or two exceptions, the papers presented were not of a character to bring out much discussion.

The professed obstetricians and gynæcologists very naturally looked to their particular section for edification, and we presume that they were not disappointed. The papers brought forward were of such a nature that it required a specialist to discuss them. The sphere of general usefulness was narrowed down to the requirements of such as confined themselves to the practice of high art. Still, there were enough members present to give a great deal of interest to the meetings and maintain it until the end.

The Section on Hygiene did a great deal of work, thanks to its capable and energetic chairman. The papers were in abundance, and the subjects were of great practical interest. Those discussions on the benefits of drainage were particularly valuable and suggestive, and should teach every medical man the importance of the necessary reforms advocated. It is in the direction of systematizing some plan to secure effective drainage of low lands, swamps, and other unhealthy districts that the department of State medicine and hygiene must achieve its greatest triumphs and rest its most urgent claims for the aid of scientific medical men. There is not a practitioner anywhere to be found who cannot testify, from personal observation, that a great majority of the preventable diseases are due to a lack of attention to matters of drainage. Each should do his part by contributing his mite of observation to the common stock, that it may be utilized, and in this way form the foundation for intelligent legislation. The matter has been brought up before our County Society, also by the society of our State, and much good has already been accomplished in the required direction. Every County Society, and every State Society has something to say on this point, some suggestion to offer, and some good influence to exert. The work is a stupendous one, but is not beyond the possibility of a brilliant success.

If we educate the authorities to appreciate the direct bearings of effective drainage upon the health of communities, the requisite initiation for the systematic sewerage of villages, towns, and cities will soon become an accomplished fact. Nor only should a systematized plan be agreed upon to remedy existing defects, but every effort should be made to prevent such a necessity.

The recommendation for a National Sanitary Bureau was a good one, but is a little premature. The efforts should be directed in the first place towards the formation of Health Boards in the different States, similar to the Board already existing in Massachusetts. When this is accomplished the formation of a National Bureau will be an easy task.

The discussion upon the effects of liquor was well enough in its way, and was only excusable because nothing very radical was aimed at. Medical men, as a class, take the right view in regard to the action of alcoholic liquors; but these views have no particular bearing upon the so-called moral aspect of the question.

The community, on the other hand, are pretty well settled upon the strictly social bearing of the evil, and

no particular recommendations of a body of physicians can sensibly affect it one way or the other. In fact, the duty of setting ourselves right before the community is a merely fanciful one, and we only waste our time upon the discussion of a question upon which every conservative thinker can have but one opinion.

The reports of the sections were taken by special reporters provided by the Committee of Arrangements; but these official reports were not published during the session of the Association, as was expected. This could hardly have been done, as there was not time enough allowed to get lengthy reports ready. In the place of such reports, however, we had the account in the daily papers of Detroit—notably the *Free Press* and *Tribune*—and which were singularly accurate, and remarkably full. But after all, perhaps, this plan of enlisting an interest in the proceedings by the local press will be the only practical manner of solving the difficulty of having the proceedings for the prompt use of the members.

The press, not only in Detroit but everywhere else, as far as we are aware, have treated the Association well, but the best of all was, that there was no occasion for any disparaging remarks on behalf even of such as would strain a point to crack a joke at the expense of scientific medicine. We hope it may always be so with the Association.

Reports of Societies.

THE SECTIONS OF THE AMERICAN MEDICAL ASSOCIATION.

Practice of Medicine, Materia Medica and Physiology.

Dr. N. S. Davis, of Chicago, Chairman.

Tuesday, June 2.

This section met at the Detroit Theatre, at 2.30 P.M., June 2, 1874, and was called to order by the chairman, Dr. N. S. Davis, of Chicago.

ON ECZEMA.

Dr. L. D. Bulkley, of New York, first read a paper on "The Management of Eczema," in brief as follows:

Eczema, the most frequent of skin diseases, attacks all classes and conditions of persons, and must, therefore, demand a very varied treatment, different in each case, which to be successful must depend upon its pathology. It must be regarded as a dermatitis, but differing from all other inflammations of the skin in its catarrhal feature, which is more manifest in its acute states. In chronic eczema we have rather to do with the products of inflammation—the infiltrated cells which are found by the microscope in the rete mucosum, derma, and even between the fatty elements of the adipose tissue, and which are discovered clinically by the increased thickness of a fold of diseased skin. While this thickening remains the disease will return.

Every dermatitis is not an eczema. Simple dermatitis may be produced by irritants, chemical or traumatic, which will tend to recover spontaneously on the removal of the cause; while true eczema may result, in some cases, where the special cause exists, in a dyscrasia, which although incapable of demonstration is as sure as that resulting in gout or rheumatism.

Although eczema has been divided into acute and chronic, there is no definite line to be drawn between the varieties, as they merge gradually into each other, and are often coexistent; hence the difficulty in managing the disease. The main indications are to so soothe in irritable and stimulate in chronically inflamed eczema, and this Hebra had been one of the first to clearly define. Where there is much hyperæmia such applications as washes containing gently astringent powders are called for, as calamine, oxide of zinc, bismuth, etc.; but the first indication is always to remove irritants. Thus in scabies we destroy the itch mite, and the artificial dermatitis ceases, and in eczema of the head, caused by lice, we cure the eruption by destroying the cause. But it is very necessary to remember that air and water are very irritating to an eczematous skin, as also scratching in any way, and these elements must be removed, however difficult the task, and this is accomplished by powders, washes, ointments, and collodion. Powders in very acute states, composed of starch or lycopodium dust, with zinc or bismuth, and camphor or morphine to allay itching; these must all be very finely pulverized or they will surely irritate. Ointments are called for when exudation has more or less ceased, and these act quite as much mechanically as by virtue of any medicaments they contain. Cod-liver oil, or mutton suet, with lard, suffice very well.

It is very essential that all greasy applications be perfectly fresh, as the least rancidity acts most injuriously. Much harm is done by the crude and irritating preparations dispensed with culpable carelessness by druggists. Oxide of zinc ointment is widely known and very efficient; but others are likewise very serviceable, as white precipitate and red oxide of mercury well diluted, or tannin or bismuth. Hebra's diachylon ointment is valuable, but has not seemed to answer as well here as in Vienna. Flexible collodion may be painted over small patches of subacute eczema, with healing effect; but if the surface is at all raw, it is painful, and if there is any exudation it is quickly forced off.

Chronic eczema is quite a different affair in its local treatment, as here we have the products of disease to remove and the morbid cell action to overcome. Hebra stimulates violently with strong potash solutions or green soap; but American skins do not stand this harsh treatment well, and few will submit to it; and, finally, the same ends may be accomplished often by other means. The compound tincture of soap of Hebra, composed of equal parts of the green soap, oil of cade, or tar and alcohol, is valuable in many instances, but is unpleasant of application and removal, precipitates on dilution with water, and, moreover, the alcohol is not always well borne. For these reasons the "*liquor picis alkalinus*" is brought to public notice, where the tar is made to combine with water, by means of caustic potash, after the formula:

℞. Picis liquidæ..... ʒ ij.
Potass. causticæ..... ʒ i.
Aqua fontan..... ʒ v.
M. ft. "Liquor picis alkalinus." Sig. used diluted.

This we presented to the profession at a meeting of the New York Dermatological Society, and published in the Archives of Scientific and Practical Medicine, in February, 1873, and have used daily since with increased confidence. This relieves itching greatly, and may be employed in various ways. Diluted 1 part to 12, 16, or more of water, in acute cases, followed

by an ointment, or 1 part in 5 to 10 for the more subacute form, and with equal parts of water or full strength in very chronic cases. It may also be advantageously employed in ointments, adding 3 i.–3 ij. to the ounce.

More severe measures are sometimes necessary, as cantharidal collodion, or acetum cantharides, or very strong solutions of caustic potash, or nitrate of silver, or the strong mercurial ointments.

Between these extremes of treatment many varieties and forms of eczema demand corresponding alterations and combinations, care being taken to soothe when required, and to restrain stimulating applications from doing harm.

Local measures have been described first—not because of greatest importance, but for the opposite reason—to impress the fact that their effects are but local and temporary, rendered necessary by each recurrent attack; whereas true eczema is a constitutional affair, demanding constitutional management; while a knowledge of topical means is necessary to insure present relief, to assist internal medication in breaking up a local dyscrasia, and to prevent patient and friends from applying what will be actually injurious. But arsenic is not the only remedy for eczema. Its constitutional management is embraced under three heads—1. Dietetic; 2. Hygienic; 3. Medicinal—all very important. Infantile eczema is often caused and kept up by some error in diet, a correction of which may cure the disease. The same is true of adults: a hearty meat diet increases an acute general eczema, and alcoholic stimulants but add fuel to the flame, while dyspepsia renders many cases incurable. 2. Hygienic measures are essential: fresh air, bathing, exercise, recreation, etc. 3. Medicines are called for, because true eczema cannot fix and maintain itself in a perfectly healthy organism; its presence is an evidence of debility.

Internal medication comes under many heads—cathartics, diuretics, alkalies, tonics, sedatives. *Cathartics* are serviceable on entering treatment, but their continuance and abuse increases cutaneous irritation. *Diuretics* are demanded in a goodly proportion of cases, as also *alkalies*, because imperfect oxidation and acidity lie at the bottom of much cutaneous pathology. The various ways of removing this acidity must be employed as required. Acetate, bitartrate, and citrate of potassa, sulphate and carbonate of magnesia, carbonate and solution of the acetate of ammonia, sweet spirits of nitre and liquor potassæ, also soda with rhubarb, are precious remedies to those who have tried well their effects. The "*Liquor picis alkalinus*" may also be given in quarter to half teaspoonful doses, largely diluted, between meals, thus giving an alkali combined with tar internally, which latter has long been of some repute in eczema. *Tonics* are exceedingly valuable, and the list in daily use is not large. Quinine, strychnine, iron—of which the ammonia, citrate, sulphate, pyrophosphate, tincture of the chloride, syrup of the iodide, and sweet wine of iron, are the most common—arsenic, the mineral acids, vegetable bitters, as cinchona, gentian, columbo, and quassia, with colchicum for the gouty. Arsenic occupies but a single place here; its use has been greatly overrated in skin affections, although it is one of the purest nerve-tonics we possess. Cod-liver oil comes nearer to being a specific for eczema, and is of inestimable value, not only in strumous cases, but in many apparently in excellent health. *Sedatives* become necessary at times: they are opium and morphine, bromide of potassium, and ammonium and hydrate of chloral. This latter, chloral, gives quiet sleep, and may be used in the daytime, or half an hour before undressing.

All this constitutional management, one may say, is only that which might be called for were no eczema present; and that is exactly what is desired to be impressed by the paper, that attention to all these points is necessary to really cure the disease. Skin diseases, to be well treated, must be managed on sound pathological principles, diagnoses correctly made, and causes removed as far as possible. The local management presents some difficulty at times, as all must confess; but remembering the acutely irritable nature of most skins with eczematous inflammation, and the necessity of cooling derivative measures used conjointly, we will be less liable to do violence to nature, and to hinder the attempts she is making toward cure.

The subject is by no means exhausted, but what has been said may be embraced in the following propositions:—

1. True eczema is a catarrh of the skin, properly acute, but very commonly subacute and chronic, and is entirely analogous to catarrh of the mucous membranes, which are indeed but involuted portions of the cutaneous envelope. The absence of moisture in many cases does not disprove this, for if these dry parts be kept covered with any impermeable dressing, we soon find that the material which forms scales is the same as in other cases, catarrhal, and stiffening linen.

2. This catarrh tends to run a certain course, accompanied by definite pathological changes; and the disease which we meet with more commonly is largely made up of the relics left in the skin—that is, thickening caused by a deposit of adventitious cells, mostly in the rete mucosum, but also capable of extending into the papillary layer, derma, or even deep into the adipose tissue.

3. Much that is called eczema is properly only a dermatitis, or ordinary inflammation of the skin, tending to spontaneous recovery when the cause is removed and irritating agents kept away.

4. Eczema, in its true sense, is not a local affair, but one intimately associated with blood changes, represented in the main by a sub-oxidation or hyper-acidity, as found in the stomach and kidney; and this state, moreover, is closely allied to gout, rheumatism, and scrofula.

5. Debility, pure and simple, does not cause eczema, but may, by its existence, prevent either the recuperative action of nature or the beneficial effect of remedies.

6. Eczema being an acute disease, running a definite course, our treatment must consist principally in avoiding irritating elements, correcting systematic errors, debility, acidity, etc., favoring the action of the emunctories, and locally making such applications as soothe and restore tone to an irritated and inflamed integument.

7. The products of eczema, the thickening and consequent scaling and itching, are removed by stimulating applications, and such pure tonics as act directly on the nerves, causing absorption through the capillaries, as quinine, iron, arsenic, strychnine, and the like.

8. Arsenic and zinc ointment, while serviceable in many instances, are so far from being specifics for eczema, that their use is injurious in many cases, while almost always other remedies either will suffice alone or greatly assist their action.

This paper was referred to the Commitee on Publication.

Some discussion followed, after which DR. D. J. FARNSWORTH, of Iowa, read a paper on "The Therapeutics of Ammonia," which was referred back to the author, with a request to publish in some medical journal.

Wednesday, June 3.

WEST VIRGINIA HERBOLOGY.

A paper was presented from Dr. E. A. Hildredth, of West Virginia, on the medical botany of that State, giving a catalogue of indigenous plants, with their therapeutic effects, etc. Without being read the paper was referred to the President, with authority to have the same published in the Proceedings if he deemed it suitable.

THE CINCHONA TREE.

The President presented the report on the cinchona tree in the United States, which was submitted to the general session on Tuesday, and by it referred to this section. The committee reported favorable progress, and asked to be continued. On motion, the section concurred in the recommendation, and the committee was continued.

CEPHALIC CIRCULATION.

An elaborate paper on "Mechanism of the Cephalic Circulation," prepared by Dr. R. A. Vance, of New York, was read by the Secretary. His conclusions as to the peculiarities of cerebral circulation are condensed as follows:

1. Atmospheric pressure operates in such manner as to keep the fluid contents of the skull at all times the same.

2. The heart can, under certain circumstances, exert a compressing influence upon the encephalic structure; and

3. The relative qualities of arterial and venous blood and extra-vascular serum vary with cardiac contractions, respiratory movements, sleep and wakefulness, and mental excitement and repose.

Some criticisms were ventured upon the paper, the chief of which were that there was nothing original in the views advanced; that they can be found in the modern standard works on physiology. One speaker took exception to the statement that atmospheric pressure has anything whatever to do with cephalic circulation. On motion, the paper was referred back to the author, with permission to publish the same in any medical journal at his own expense.

MISCELLANEOUS MATTERS.

On motion, the annual address of the chairman of the section, read in the open session in the morning, was made the special order of the section for Thursday, at 2.30 o'clock.

Dr. F. R. Burcham, of Flint, Mich., read a paper on "Uræmia." After a somewhat extended discussion the paper was referred to the Committee on Publication.

Thursday, June 4.

Dr. L. D. Bulkley, of New York, read a paper presenting a "New Remedy for Pruritis."

DR. DAVIS' ADDRESS.

The address of Dr. Davis, president of the section, delivered before the Association and referred to this section, was taken up.

Dr. Gray moved that it be referred to the Committee on Publication, with a request to publish.

Dr. McLaughlin wanted a little light on points which were not clear to him in the address. If it condemned old-fashioned blood-letting, he had some remarks to make, and if it did not, there was room for remarks.

Dr. Davis said the paper made no assertion touching the doses. It did condemn the extremes run into in old times in the matter of bleeding and purgatives. The aim of the paper was to counsel against following fashions without investigation.

VENESECTION.

Dr. McLaughlin rose to the defence of the old-fashioned blood-letting. Forty years ago he had bled freely, and believed he did right. He did bleed now, and thought he was right now as well as then. Men had changed, and were not sick now in the same way they used to be. He also believed that the same medicine would produce directly opposite effects, according to the dose.

Dr. Quimby liked the address because of the happy medium it struck, which was just the thing the profession needed. The tone of the paper on the use of alcohol suited him; it was the most abused of drugs, and the profession are largely responsible for intemperance.

Drs. Chubbuck, of Elmira, N. Y., Rouse, of Detroit, and Buckham, of Flint, discussed the paper.

Dr. Davis said the point which he wished to have considered was the suggestion as to the practicability of instituting here lines of investigation. Golden opportunities for investigation were lost because men were not at their posts. Take up a subject and pursue it, even if they do not get enough in a year to make three printed lines. He suggested the appointment of a committee to take observations throughout the country, simultaneously, of the atmospheric conditions at different points, and thus catch any epidemic that is going. Then let the working practitioners trace the diseases to their incipient causes, and that these committees send their reports to the president before the meeting of the Association, and have all things brought together.

Dr. Gomer thought no physician should be allowed to collect a fee until he had spread a record of the symptoms on his register, showing a true case of disease.

Dr. Bulkley moved an amendment to the motion, to the effect that the suggestions of the president for investigating committees be adopted; Dr. Davis to be chairman of the Committee on Disease, and Dr. Toner, of the Meteorological Committee, with power to appoint the members of their respective committees. The amendment was agreed to, and the motion as amended passed.

HYDROPHOBIA.

Dr. Garrish, of New York, read a paper on hydrophobia. Referred to some medical journal.

Dr. E. W. Gray, of Bloomington, Ill., presented a very interesting paper on "Physiology and its Relation to the Practice of Medicine." Dr. Edgar Weeks moved that it be referred to the Committee on Publication, as, if not highly original, it was a paper highly suggestive. It was so referred.

Dr. Seguin gave an exhibition of the workings of his system of "Mathematical Thermometry." The thanks of the Association were tendered to the doctor, and an outline of his system was ordered to be incorporated in the minutes.

A paper on "Electricity as a Restorative Agent in Narcosis and Asphyxia," sent to the Association by Dr. J. J. Caldwell, of Baltimore, was referred to a committee, consisting of Drs. Bulkley, Edgar, and Frothingham, for such action as they may deem proper. The section then adjourned.

Surgery and Anatomy.

Dr. S. D. Gross, of Philadelphia, Chairman.

Tuesday, June 2.

TUMOR OF STERNUM.

Dr. Dunlap, of Springfield, Ohio, addressed the meeting, and read a paper relative to an operation performed by him in removing a very large tumor from near the sternum. The patient was H. S., of Greenville, Ohio, and the doctor was first consulted on the case in September, 1870. He advised that nothing be done then, there being a probability that it might subside. It continued to grow, however, and in April last Dr. Dunlap, assisted by several physicians, undertook the operation of removing the tumor, which was successfully performed. The patient survived the operation some six weeks. The tumor removed was a very large one, weighing three pounds, and another weighing five pounds was removed after death. The paper was referred to the Committee on Publication, to be published.

EPIPHYSEAL FRACTURE OF HEAD OF HUMERUS.

Dr. E. M. Moore, of Rochester, read a paper on epiphyseal fracture of the superior extremity of the humerus, of which the following is an abstract:

Professor R. W. Smith has stated that separation of the humerus at the line of junction of upper epiphysis and shaft to be not uncommon in early life. The head of the bone can be distinctly felt in the glenoid cavity; a slight depression is felt beneath it, the head remaining motionless when the shaft is rotated. A striking and abrupt projection is observed beneath the coracoid process, caused by the upper extremity of the shaft being drawn inward by muscular action. The shaft seldom clears the head, and hence the small amount of shortening. This projection is smooth and slightly convex, in contrast to the irregular margin of ordinary fracture. The elbow projects but little from the side, and can be readily brought in contact with it. Pressing the upper end outward, while holding the elbow to the side, and making extension and counter-extension, the deformity disappears, to recur as soon as left to unopposed muscular action.

Diagnostic points are, first, the projection beneath the coracoid; and second, the immediate recurrence of the deformity when the means for reduction cease retaining the shaft in place, there being no fracture of superior end of the humerus in which retention is so difficult. In general, the true nature of the injury is unrecognized, although the symptoms have been clearly stated by Sir A. Cooper and Professors R. W. Smith and Frank H. Hamilton. This arises from no accurate conception of the change of position having been put forth, and no method securing precise retention having been proposed, in so far as he (Dr. Moore) was aware.

The symptoms of this fracture are striking and uniform. The shaft of the humerus is so inclined as to carry the elbow a little backward and outward, while the superior end of the shaft is brought forward so as to make a prominence less rounded than the head, and lower down. It is usually found an inch and a half (at the age of twelve or fourteen) below the acromion and near the coracoid process. The curved line from the acromion down to the projection has a long sweep, instead of the small sphere of the natural head. This appearance is pathognomonic, and may be safely trusted in diagnosis without insisting upon crepitus. As in other epiphyseal fractures this is not clear and sharp, as when the fracture is of bone, but is muffled. When the arm is moved gently, and without grasping the head, the peculiar lock of the surface is sufficient to cause the head to rotate, and thus the timid practitioner fails in getting his pathognomonic sign; but if the head be firmly grasped it cannot only be felt in the glenoid cavity, but held sufficiently firm to get this muffled crepitus by rotating the humerus or by carrying the elbow inward, and thus rubbing the two surfaces on each other. In addition to these striking symptoms we may add a shortening of half an inch or a little more. When the two shoulders are inspected from behind, the impression given is that of luxation, for there is a slight flattening of the shoulder produced by drawing the fibres of the deltoid a little forward. The breadth of the shoulder is also increased when seen in profile. The motions of the arm are somewhat circumscribed, the ability to carry it upward and forward, as well as upward and outward, is impossible much beyond a right angle with the body, but affects the rolling of the scapula so that the hand can be placed on the head.

Reduction is effected by carrying the arm forward and upward to the perpendicular line. Retention is effected by moderate extension while bringing the arm down by the side, maintaining this slight extension until dressings for the purpose of continuing it are applied. Swinburne's method fulfils the indications easily and perfectly.

Even if not restored the arm soon becomes useful, and nature gradually rounds off the prominence of the diaphysis and elongates the capsule at the lower border, allowing the motion upward to improve.

Dr. Hughes, of Pennsylvania, said the danger is likely to be that a fracture of the anatomical or surgical neck of the humerus will be mistaken for the fracture which Prof. Moore speaks of, and that his method of treatment for one would be injurious to the other.

Dr. Keller stated that the cases to which Prof. Moore referred occurred only in childhood or adolescence, before ossification of the epiphysis takes place. He had never known of a case occurring in a person over fifteen years of age, and Prof. Moore gives a case in which the oldest was nineteen years. This was the oldest person in which a case of this kind occurs.

Several other gentlemen spoke on this subject, all agreeing to the practicability of Dr. Moore's method, and he himself explaining some minor details relative thereto.

Dr. Gross, the chairman, was called upon by one of the members, and was asked his opinion on the matter presented by Prof. Moore. He stated that he concurred entirely with the views of Prof. Moore, and had no doubt that the method of reducing this fracture, which has been found so difficult, was a correct one.

THE TREATMENT OF FRACTURES.

Dr. Sayre, of New York, stated that he had a long paper prepared, but did not propose to read a word of it. He would only explain some of the points. Within the past few weeks there had come to his knowledge three cases of compound fracture treated in the almost obsolete rule of waiting for nine days for the swelling to subside. He held that a fracture should be reduced as soon as it occurs, or as soon as it is practicable, and that the bone should be perfectly adjusted at once. He thought it was wrong to wait until the swelling subsides before any effort is made to reduce the fracture. If a fracture is perfectly adjusted, as it can be in every case by proper care, there will be no shortening of the limb or bone. Of the several ways of treating a compound fracture, he preferred the use of plaster-of-

Paris, by which means he has secured the best results. The patient should be allowed to get around and use his limb as soon as practicable. Of 115 cases treated in Bellevue Hospital last year 111 showed that there was less shortening of the limb than any like number of cases on record. Dr. Sayre explained his points by a mechanical appliance, showing the action of the muscles when a fracture of the bone occurs, and explaining the means of adjusting the fracture.

DR. GREGORY, of St. Louis, MO., was astonished that a gentleman of the medical profession from New York should come here and state that a compound fracture could occur and be reduced without a shortening of the limb. He had never seen a case of this except in young people. The inflammatory process necessary to the adhering of the fratured bones, rendered it necessary that it should be shorter. He claimed that it was a practicable impossibility for a fracture to be adjusted without any shortening of the bone. He uses plaster-of-Paris in the reduction of fractured bones, but he did not think it was superior to the extension and coextension method used by other physicians of his place.

Wednesday, June 3.

This section resumed the discussion of the paper read by Dr. Sayre, on the previous day, upon the management of fractures.

DR. PIERCE, of Illinois, suggested that the discrepancy of opinion, in regard to shortening, might be due to the fact that deductions were drawn from the result of measurements which had been made in different cases at different stages of the reparative process; that contraction of the cicatricial tissue binding together the broken fragments might and would go on increasing for several months, and then the surgeon who in a given case might dismiss his patient with little or no appreciable shortening, would find on subsequent measurement undoubted shortening.

PROF. SAYRE said that in the cases which he cited the measurements were made by Prof. Frank Hamilton as well as himself, and that, too, with a preconceived prejudice and expectation of finding more or less shortening, but that no shortening was appreciable, and he therefore knows that shortening is not *necessary*, and at his request Dr. King, who was present, presented himself as an example where fracture of the femur had united without any appreciable shortening. The success in this, as in other cases, was attributed to the very close watching and adaptation of the broken fragments by extension, increased or diminished as appeared necessary, even several times a day.

Dr. Sayre said he was afraid that his statements, in regard to the treatment, were not correctly understood. The direction which he intended was to make extension and counter-extension until the broken fragments are in coaptation, and then simply retention. The muscles and soft parts are in their normal position, and shortening is not natural if properly treated. There is no need of keeping up extension after it is in its proper position; simply retention is required.

The many patent appliances for dressing fractures the practical man will not rely upon, but will improvise whatever is needed for the occasion. Do not wait two or three weeks, as is frequently done, but dress the fracture at once, and keep the parts in apposition if you expect a good result.

After some further discussion respecting the best appliances and methods of dressing fractures, Dr. King moved that Dr. Sayre's paper be referred to the Committee on Publication, with the recommendation that it be published. The motion was carried, after which the section adjourned.

Thursday, June 4.

DR. W. T. BRIGGS, of Nashville, was called to preside.

DR. BEARD, of New York, delivered an address on the uses of electricity. He first spoke of a case of goitre, the patient measuring sixteen inches around the neck, which he treated with electricity with great success, the cure being almost complete. The last quarter was more difficult to reduce, and required more time than the first three-quarters. Benign tumors, he said, can be treated successfully by electricity. If a tumor is not a malignant one, it can be cured by this means, but malignant tumors cannot thus be treated. In operating on tumors he plants the needle beneath it, and works up the base by electrolysis. He has also been treating by electricity diseases of the skin and nervous diseases. He spoke of a case of eczema in the limbs, which he treated successfully by galvanism. He applied electricity through the nerve-centre at the brain, and the diseased part was not touched with electricity. The patient was quite cured in a few weeks. This looked as though the nervous system had much to do with this disease of the skin, and that it can be treated through the nerve-centre. He hoped that others would try this method. What electricity did, it did by improving nutrition. He thought that eczema and prurigo could be treated successfully by electricity. His conclusions are as follow:

First. That certain benign tumors, as goitres, enlarged glands, and cystic, can be made to diminish or disappear under electrolysis.

Second. That fatty tumors and enlarged lymphatic glands are usually very difficult to diminish by electrolysis, and sometimes they will not diminish at all.

Third. That malignant tumors will not usually diminish, and rarely, if ever, entirely disappear under the electrolysis; but the pains connected with them can be treated most successfully by electrolysis.

Fourth. That malignant tumors, when sufficiently accessible and not too far advanced, may be treated by electrolyzing the bases, or "working up the base," as he terms it, and this method promises more permanent results than have been obtained by the usual treatment

Fifth. That certain diseases of the skin—herpes, eczema, and prurigo—may be treated by different methods of using electricity, with the highest success.

Sixth. That diseases of the skin may be treated by local and central methods of using electricity, but some of the most brilliant results in the treatment of chronic eczema have been obtained by galvanizing the nerve-centres, in the method of central galvanization, without making any application to the diseased parts. The results of this method of treatment seem to show pretty conclusively that chronic eczema is, to a considerable extent, dependent on the central nervous system.

FRACTURES AGAIN.

DR. HUGHES, in view of the discussion and action taken on Wednesday, on treatment of fractures, offered the following:

Whereas, The members of the surgical section of the American Medical Association have listened with interest to the report of Prof. Sayre, of New York, on the subject of fractures; and,

Whereas, Statistics accompanying said report evince

in the institution represented (Bellevue Hospital) unusual results; therefore,

Resolved, That this section, after free discussion of the report, and its reference to the Publishing Committee, would express their opinion, based upon experience, that the results in relation to shortening following fractures is better than can be looked for in general practice.

The resolution was adopted.

Dr. Pierce, of Illinois, offered a resolution that Dr. Sayre be requested to make a second examination, as far as possible, of all the cases reported by him, one year after they have been discharged from the hospital as cured of fractures, and report the result to this Association next year.

Dr. Keller, of Louisville, Ky., moved to lay the resolution on the table. Lost, and the resolution was adopted.

The section then took up the paper read by Dr. Gross in the meeting of the general Association on Wednesday, on syphilis, and it was discussed by Dr. Sayre, of New York; Dr. Gunn, of Chicago; Dr. Keller, of Louisville; and Dr. E. M. Moore, of Rochester, and was ordered printed.

Dr. Keller moved that in furtherance of the views expressed in the valuable address on syphilis, delivered by Dr. Gross, a committee of three be appointed to report the most feasible plan of State legislation to interrupt and control the rapid spread of syphilis.

The resolution was laid on the table.

Dr. Sayre said he wanted to present a case of a boy who had his leg broken, an oblique fracture, and it was treated by Dr. Farrand, of this city, and so successfully has it been treated that he wanted those who did not believe that a fracture could be reduced without shortening to tell from an examination which leg was broken. The boy was taken into the jury room and there examined by a number of physicians, who subsequently made reports on the matter, some of them finding no shortening, others reporting about one-sixteenth of an inch, and one physician not being able to say which leg was broken.

Dr. Sayre exhibited an apparatus which he had made for disease of the hip-joint, and explained its method of operation. He had applied it to a child eleven years old, who had broken her hip-joint when twenty-three months old, had suffered great torture for nine years, and one of whose limbs was four inches shorter than the other, and was obliged to go on crutches. He applied the apparatus, and extended the limb, and in six months the child was able to run about very well.

The section then adjourned *sine die*.

Obstetrics and Diseases of Women and Children.

Dr. T. Parvin, of Indiana, Chairman.

Tuesday, June 2.

THE THEORY OF GENERATION.

Dr. Joseph R. Peck, of Fort Wayne, Ind., read a paper on the "Theory of Generation," founded upon observations made on a case of prolapsus uteri. The patient was a blonde, aged 32, of amorous disposition, and was suffering from a prolapse of the uterus in the second stage (the os uteri being just inside the vulva). In the course of the manipulation to replace the organ, the patient had an orgasm, which revealed to the observer what he believes to be the function of the uterus during coitus. The os externum opens by successive gasps, and when the crisis arrives it is drawn powerfully into the cervix, thus giving the cervix a sucking motion for the semen.

The paper was discussed by Drs. Sims, of N. Y.; White, of Buffalo; Pallen, of St. Louis, and others; the prevailing sentiment being that the case was not a fair one for illustration, as the nervous irritability of the female would of itself induce abnormal nervous phenomena, and that it was quite likely that this peculiar action of the os uteri came under such a category.

Wednesday, June 3.

INVERSION OF THE UTERUS.

Dr. Bontecue, of Troy, N. Y., read a paper on the "Inverted Uterus," in which he detailed a modification of Dr. White's repositor.

The paper was discussed by Prof. Sims, of New York, and Prof. Byford, of Chicago, after which it was referred to the Committee on Publication.

Dr. Lucas presented, on behalf of Dr. Scott, of Woodstock, Canada, a new species of the pessary, and Dr. Scott explained somewhat minutely the method of using it. Its merits were discussed by Drs. L. F. Warner, of Boston; Julius Miner, of Buffalo; M. A. Pallen, of St. Louis; Prof. White, of Buffalo; Prof. Byford, of Chicago; Dr. Ditherby, of Syracuse; Dr. Stockwell, of Port Huron, and Dr. John Morris, of Baltimore.

A vote of thanks of the section was tendered to Dr. Scott for presenting the instrument.

Thursday, June 4.

The meeting was devoted to the general discussion of "Transfusion in Ovariotomy."

Dr. Parvin presented for the inspection of the Society some instruments used in transfusion, whose merits were discussed by Drs. White, of Buffalo, Forbes, of Ohio, and Bussey, of Washington.

The treatment of the pedicle in ovariotomy was discussed by Drs. Sims, of New York, and Dunlap, of Springfield, Ohio.

Section on Public Health and Hygiene.

Dr. A. N. Bell, of Brooklyn, President.

Tuesday, June 2.

A NATIONAL SANITARY BUREAU.

The report of Dr. Bowditch, of Massachusetts, was read. It recommended the establishment of State Boards of Health, and gave a history of the establishment of the Massachusetts Board, which was organized on June 21st, 1869, though the idea was suggested twenty years before. It consisted of seven members, with seven years' term of office, one retiring each year, appointed by the governor and council. Its members were three of them physicians, and four laymen. The same proportion has since been maintained. The writer thought the admission of the laity was wise, and worked admirably. The board has power to close up any manufactory or branch of trade obnoxious to health, and have frequently been called on to do so. The courts have sustained them, and granted injunctions at their request. One of the greatest triumphs of the board was the erection of the Brighton *abattoir*, in place of the many stinking slaughter-houses, which is kept clean by the rules of the board. Dr. Bowditch was not in favor of the establishment of a National Sanitary Bureau at present, but recommended members to urge the organization of State and local boards of health.

The resolutions referred to the section for consideration and action this year were read. They (first) de-

clare in favor of the establishment of a National Sanitary Bureau, similar to those of agriculture and education; and (second) request the United States Educational Bureau to extend its scope of inquiry so as to include vital disease and mortuary statistics in relation to local and other influences, and to disseminate the information thus obtained.

Dr. R. C. KEDZIE favored the first and opposed the second resolution.

Portions of a paper by the secretary of the section, Dr. A. B. STUART, were read, favoring a National Sanitary Bureau in the future, but recommending that for the present the Surgeon-General's office be the repository for vital statistics.

DR. BELL read a portion of his report on the subject, holding that at present the establishment of a national bureau is not advisable, and urging that work be now directed to the organization of State boards of health. There are now only six States which have established boards of health, Maryland being the last State to organize such a board.

DR. BROWN, of Waco, Texas, said that a State medical board had been organized by the State Association of Texas, and progress was being made toward the establishment of a State board of health. He also suggested the establishment of State medical journals.

DR. COCHRANE, of Mobile, Ala., spoke at some length. He opposed the present establishment of a national board of health, criticised the details of the organization of the Massachusetts Board of Health, and spoke of the history of sanitary legislation in Alabama.

DR. KEDZIE moved the following resolution:

Resolved, That it is expedient at this time to petition Congress for the establishment of a National Sanitary Bureau.

The resolution was discussed at length, Drs. Kedzie, of Michigan, Brown, of Texas, Westmoreland, of Georgia, Pratt, of Michigan, Johnson, of Illinois, Cochrane, of Alabama, Van Demen, of Tennessee, Waterhouse, of Wisconsin, Jones, of Ohio, Baker, of Michigan, and Hitchcock, of Kalamazoo, Michigan, favoring it, and Drs. Thoms, of New York, Howard, of Maryland, Graham, of Illinois, and the president, Dr. Bell, of New York, opposing it, on the ground that it might interfere with the work of establishing State boards of health. It was finally adopted.

After some further discussion and suggestions, the following resolution was adopted, to be reported in connection with the one above:

That, with a view to the establishment of a national sanitary bureau, it is expedient, at the present time, to press, through State societies and physicians, in all the States, upon the Legislatures of our several States, the importance of establishing State boards of health.

The section then adjourned.

Wednesday, June 4.

PUBLIC DRAINAGE.

DR. R. C. KEDZIE, of the Agricultural College of Michigan, read his paper on "The Influence of Drainage on the Public Health."

After referring to the topographical features of Michigan, and the influence of drainage upon the health of the State, he stated that he had prepared a circular letter, which he mailed to physicians all over the State, requesting categorical answers to the following questions:

1. Does the field of your medical practice embrace any considerable amount of swampy or wet lands with imperfect natural drainage?

2. Has any considerable amount of such lands been drained by ditches within ten years past?

3. Has drainage of such swamps removed, diminished, or modified malarial diseases in their neighborhood?

4. How large a percentage of diseases in your practice is of malarial origin?

5. Does the drainage of swamps have an *immediate* influence of any kind on the classes or the type of disease?

6. Has the type of diseases, as a whole, changed in your field of practice within ten years past? If so, what are the changes?

7. Please state any views you may have of the influence of drainage on public health, as witnessed in your practice or coming under your observation?

He had received numerous replies to these questions, which he embodied in his paper, and which proved in quite a satisfactory manner the good effects of drainage.

The paper concluded as follows:

The fall of 1856 was very dry in this State; the marshes became so thoroughly dried out that autumnal fires, which often prevail here, spread to the marshes, and hundreds of thousands of acres of peaty matter were burned up. The air became filled with a white smoke, having the same appearance and creasotic smell as the smoke from a charcoal pit. So dense was this smoke in the central parts of the State, that for a week business was almost suspended. Farmers were lost in their own fields, and in travelling on the roads it was almost as difficult to avoid collisions as on a dark night. Many persons were killed by the stifling smoke, and great numbers of cattle were destroyed by inflammation of the lungs caused by the smoke. The fish were killed in most of the streams, and it was feared that a pestilence would be caused by their putrefaction.

The trees in these marshes were burned out by the roots, but without consuming their trunks or branches. The marshes thus became filled with a vast amount of fallen timber.

The years 1857–8 were characterized by a large amount of rain-fall, so that the marshes, filled with fallen trees, again became filled with water. The decomposition of this amount of vegetable matter caused an amount of malarial fevers in 1859–60 such as had never been known in this region. The effluvia which arose from these marshes was horrible.

It might seem that the large destruction of slowly decomposing vegetable matter by the fires of 1856 would diminish the amount of malaria; and such would very possibly have been the result if a large amount of vegetable matter had not been added in the bark and branches of the fallen timber, which, undergoing much more rapid decomposition, gave rise to a vast increase of malaria.

DRAINAGE IN VIRGINIA.

The Chairman announced that, without any conference between the gentlemen, Dr. J. L. Cabell, of the University of Virginia, had prepared a report on the effects of drainage on the public health of Virginia, and had taken precisely the same method as Dr. Kedzie, *i.e.*, inviting replies from physicians. A number of extracts were read from Dr. Cabell's report, the conclusions reached being that one-half of all the mortality, and sometimes three-fourths, was caused by defective drainage.

Limited time prevented the reading of the entire report of Prof. Cabell, which Dr. Bell characterized as being in all respects a most valuable one.

DEFECTIVE DRAINAGE IN NEW YORK.

Dr. Bell, as representing New York in the section, read a paper on defective drainage as a cause of disease in the State of New York. His paper began with a review of the topographical and hydrographical survey of the State, which was begun in 1830 by the Medical Society of the State of New York. With regard to the city of New York—after enlarging upon the beauty and glory of the city, its general salubrity and commercial importance as the metropolis of America—Dr. Bell showed that the sewerage of the city was inefficient to carry off all the water, and conforming as it did to the rectangular plan of the city, the sewerage was incompatible with the thorough drainage, and a cause of epidemics. Within the last two years, however, a law had been enacted and measures taken to secure deep drainage in that city.

The report of Dr. Bell was not read entire, but will be published in the Transactions of the Association.

The Chairman then read the report of Dr. Robert D. Murray, Surgeon U.S.M.H. service, on climatic influences of Key West.

Dr. Bell, of Brooklyn, gave his views on the malarial influences arising from the non-absorption of surface-water in heavy clay soils, after which

Dr. Kedzie, of Lansing, explained the peculiarities of the clay soils of Michigan and their modes of drainage, either natural or artificial.

Dr. Foster Pratt, of Kalamazoo, gave facts regarding under-drainage, as discovered by the digging of wells in and about his locality. From such observations the deduction was made that a considerable percentage of disease was due to the percolation into the wells of surface-water, and the natural accumulations of a large town.

Dr. E. W. Gray, of Bloomington, Illinois, inquired of Dr. Pratt the prevailing types of diseases in Kalamazoo.

Dr. Pratt answered that fifty per cent. of them were malarial or typhoid.

DRAINAGE IN CHICAGO.

Dr. H. A. Johnson, of Chicago, recited the physical and topographical features of that city, which rested, he said, upon a bed of alluvial clay descending toward the lake, and covered with sand of gradually diminishing depths from the shores of the lake westward. When he first went there the diseases were of the distinctive malarial type, which the Doctor remembered in his boyhood days as being common about Lapeer and Macomb Counties in Michigan. Something like twenty-five years ago all the surroundings of Chicago were regarded as swampy, and the watershed was so low that boatmen passed from the head of the Chicago River to the head of the Desplaines with a portage of but twenty-five miles. Since that time a good system of sewers had been inaugurated, and with such remarkable hygienic effects that a case of fever and ague was now very rare.

There was probably no city in the world of a like population which covered so large a territory as Chicago, and as refreshing breezes were constantly blowing either from the lake or the prairies, and an abundance of excellent fresh water obtained by a tunnel into the lake; the health of the place had greatly improved, and some of the more distinctively malarial diseases had disappeared entirely, a fact greatly due to the drainage of the surrounding country. Cerebro-spinal meningitis and congestive chills were rare and exceptional diseases. The conclusions reached were that not one-tenth of the cases now were of the malarial type common twenty-four years ago. Deaths by consumption were about in the same proportion to the whole number of deaths, and there had been an increase in zymotic and typhoidal diseases.

At the request of Dr. Pratt, Dr. Johnson detailed the mode of sewerage in Chicago.

After the discussion of business of minor importance the section meeting adjourned.

Thursday, June 4.

VENTILATION OF PUBLIC BUILDINGS.

Dr. R. C. Kedzie, of the Michigan Agricultural College, moved the appointment by the chair of a committee of three who should consider the subject of the ventilation of dwelling, school houses, and other public buildings, and report to the section at the next annual meeting of the Association. The motion was agreed to, and the following gentlemen appointed as the committee: Drs. R. C. Kedzie, Michigan; A. B. Stuart, Minnesota; R. J. O'Sullivan, New York.

A NATIONAL COUNCIL.

Dr. H. B. Baker, of Lansing, Michigan, offered a resolution, the purport of which was that the chairman of the section should appoint a committee of three to prepare a bill for the establishment of a National Council of Health at Washington, and to otherwise forward that proposed measure, and report at the next session of the American Medical Association.

The resolution was adopted, and the following gentlemen appointed, viz.: Dr. H. B. Baker, Lansing, Michigan; H. A. Johnson, Chicago, Illinois; and J M. Toner, Washington, D. C.

LEGISLATIVE RESTRICTION.

Dr. Foster Pratt, of Kalamazoo, Michigan, offered a resolution to the effect that the chairman of the section appoint a committee of three to report at the next meeting of the Association, who should inquire what, if any, legislative action can be taken to secure the appointment of State Boards with authority to examine and license all who propose to enter upon the practice of medicine.

After some discussion the resolution was adopted.

The Chairman appointed as the committee called for, Drs. Foster Pratt, of Michigan; S. G. Armour, of New York; and D. W. Yandell, of Kentucky.

THE PROFESSION AND ALCOHOL.

The Chairman then read the resolutions of Dr. Frederick Horner, of Virginia, offered two years ago, and referred to this section at the last annual meeting of the American Medical Association. The resolutions are as follow, viz.:

Resolved, That in view of the alarming prevalence and ill-effects of intemperance, with which none are so familiar as members of the medical profession, and which have called forth from eminent English physicians the voice of warning to the people of Great Britain concerning the use of alcoholic beverages, we, as members of the medical profession of the United States, unite in the declaration that we believe that alcohol should be classed with other powerful drugs; that when prescribed medicinally it should be done with conscientious caution and a sense of great responsibility.

Resolved, That we are of the opinion that the use of alcoholic liquors as a beverage is productive of a large amount of physical and mental disease; that it entails diseased appetites and enfeebled constitutions upon offspring, and that it is the cause of a large percentage

of the crime and pauperism of our large cities and country.

Resolved, That we would welcome any change in public sentiment that would confine the use of intoxicating liquors to the uses of science, art, and medicine.

Dr. Bell called upon Dr. Homer O. Hitchcock to open the topic, which he did by expressing his conviction that the resolutions were expressive of what should be the action of the medical faculty of America, and concluded by asking Dr. Kedzie to read portions of his pamphlet on the entailments of alcohol, recently published and circulated by the Michigan State Board of Health.

Dr. Kedzie accordingly did so, selecting the more important passages.

Dr. John Morris, of Baltimore, Maryland, thought there was no necessity for this section to decide this matter. It was a most important subject, and when the medical profession of America spoke upon it, their voice should not give forth an uncertain sound. There were but few in attendance, and necessarily any action had upon the resolutions must represent mere individual opinions and not the calm judgment of the great body of the profession. For himself he was the director of an inebriate hospital, and had published a pamphlet taking a view somewhat similar to that of Dr. Hitchcock, although he had treated of the physical only, not the moral degeneration arising from the unlimited use of liquor.

He was satisfied that its use as a dietetic was beneficial if not desirable, and that the consumption by an adult daily of a pint and a half of ale containing five per cent. of alcohol, or a pint of claret containing ten per cent. of alcohol, was strengthening to the system, conservating and building it up. Every drop beyond this was destructive of the life forces, and if taken in excess continuously it would most certainly lead to degradation and to death.

Dr. Morris urged with much force that it was not necessary, or desirable even, for the medical profession to ally itself upon the subject with any set of men in religion or in politics. It would only tend to lessen their professional influence.

Theories written and spoken were well enough in their way, but facts and practice are better. You can't make teetotallers of men at once; the most you can do is to make them temperate. About all that can be expected of the medical profession is to tell men how much they may take with benefit to themselves, and to warn them that, if they go beyond that, ruin, inevitable ruin, must ensue.

In conclusion, Dr. Morris again urged deliberation. The matter should be decided by well-ascertained facts in regard to the medical and physical uses of alcohol, and the demand for it in well-understood cases.

Dr. Cochrane, of Mobile, Alabama, also deprecated anything that looked like hasty action in this important matter. He asserted that recent discoveries in chemistry showed that alcohol was digestible and absorbed into the juices of the body, and not simply excreted, as had heretofore been held. Other substances were found in the urine which gave the same chemical reaction as alcohol, when it was quite certain that no alcohol whatever had been taken into the system. While agreeing with many things which Dr. Hitchcock had set down in his pamphlet, he was not prepared to endorse them all. For himself he believed alcohol to be a genuine food required in the system in very many cases, and one whose place could not be supplied.

Dr. B. H. Catlin, of West Meriden, Connecticut, said that if in passing the resolutions any censure should seem to be applied to the medical faculty, it would, perhaps, be well to modify them in some manner.

Dr. Kedzie, of Michigan, said the subject was one that the profession were quite familiar with, and understood in all its bearings, and therefore there could be no censure implied in passing them.

Dr. Morris, of Baltimore, again took the floor, and dilating upon the importance of the question to the profession at large, offered a resolution that "this section recommends to the Association to appoint a committee composed of —— members, who shall examine into the subject and report to the section at its next annual meeting." The motion was seconded by Dr. Cochrane.

Dr. Bell, the Chairman, said that it was a question whether the section was authorized to refer the matter back from the section to the Association after it had previously been charged with it. For the sake of obviating this difficulty he requested Dr. Morris to reduce his resolution to writing.

Horner's Resolutions.

Dr. Kedzie read slowly and deliberately the resolutions of Dr. Horner, above given, and said they had been brought before the Association two years ago; that last year they had been referred to the section; that they were plain and to the point, and he again moved their adoption.

The resolutions were finally passed after a long and spirited discussion.

Medical Jurisprudence.

Tuesday, June 2.

Dr. Talley, of South Carolina, Chairman.

Emotional Insanity.

Dr. E. Lloyd Howard, of Baltimore, Md., read an elaborate and interesting paper on the above subject, in which he took the ground that it was impossible to define insanity by any "test" symptoms, and that each case should be examined on its own merits. In regard to the subject of punishment, he remarked:

"We cannot refrain from hazarding the opinion that the ends of justice would be better subserved, the security of society more certain, and the rights of individuals more secure, if the laws exempting insane offenders from punishment were repealed, leaving the jury to determine the guilt or innocence of the prisoner, not on the grounds of insanity alone, but from all the facts; considering, in each case where insanity is alleged, its value, if proven, as an element in forming an opinion as to punishment. No doubt it will seem cruel to many to advocate the doctrine that insane persons should ever be made to suffer criminal punishment. But we must remember the law is not to take cognizance of the sufferings of the individual so much as to the safety of the community. This is its prime object, to be secured at all cost, and mercy can only be considered as subordinate to this first requirement.

"All modern criminal law is based solely upon the principle of protection to society. It recognizes in its administration nothing of the spirit of vengeance or retaliation upon the criminal. It imprisons, or it kills, not because the culprit deserves imprisonment or death. Its penalties are never imposed with a view to cause suffering simply because it is thought merited, and as an atonement for the crime. But, always, its only and

sole object is to protect the community—either by depriving the criminal of further opportunity to commit crime, or, through the example it offers, to deter others from the perpetration of similar misdeeds. Laws are passed to protect each individual in the enjoyment of life, property, and his other rights and privileges, and with primitive provisions that warn others not to interfere with those rights; and when crime is committed—that is, when the rights of another are invaded—punishment is enforced to impress the fact that transgression is not only forbidden, but will be inevitably followed by disastrous consequences to the transgressor. There is no natural inherent right in any government or power to deprive any man of liberty or life. The power is assumed by common consent for the common safety, and is only justified by the law of self-protection, and it becomes a brutality and a tyranny when used beyond these strict requirements. But the great natural law of self-protection is supreme. It has no limits in its proper application. If any member of the community is, either through his own voluntary act or some combination of unfortunate circumstances, detrimental to the community, the community must protect itself from him. If it be through his own voluntary act, as a wilful murder, then a punishment is inflicted to prevent a repetition of the act by the same person or by others. If it be through no fault of his, but a misfortune, as when a homicide is committed in an attack of mania, then the community protects itself by putting the offender in confinement; but no *punishment* of such is inflicted, because it could have no good effect, as other maniacs would not be thereby deterred from homicide, having no proper conception of the relation of the punishment to the crime. But is it true that punishment, or the prospect of punishment, would have no good effect as applied to insane persons? Is it not a notorious fact that constantly, both in and outside of asylums, insane patients are governed by fear and restrained through dread of punishment? Having seen that it is not at all uncommon for cases of emotional insanity—men clearly and undoubtedly insane—to be possessed of the ability to discriminate right and wrong, and to have sufficiently clear intellectual perceptions of the nature and penalties of crime, could not some provision be made for controlling them through fear of punishment, while at the same time recognizing the fact of their insanity? Both as a matter of protection to the community and benefit to themselves, would it not be wise to apply to many cases of 'moral' and 'impulsive' insanity the same restraining influences we find efficacious for sane criminally disposed persons?

. . . . . .

"We find, then, that there are certain cases in which the fear of punishment acts upon the minds of persons unquestionably insane, with a wholesome and restraining influence, and it seems right and proper that the community should receive the protection which can be given it by the enforcement of the laws in this regard. If it be made certain that punishment will always follow swiftly upon the steps of those who do injury to the persons or property of others, many having the insane temperament will be controlled and have their powers of resistance to insane promptings strengthened, who might, with a less certain prospect of punishment before them, give way to their evil impulses."

The paper was referred to the Committee on Publication.

Dr. TALLEY also read a brief paper on the "Relation of Psychology to Medicine."

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, Monday Evening, May 25, 1874.

DR. ELLSWORTH ELIOT, PRESIDENT, in the Chair.

THE PAPER OF THE EVENING.

DR. CHARLES P. RUSSEL read to the Society an elaborate paper on Hydrophobia; giving an account of most that had been written on the subject from the earliest times, and comprising an estimate of the total number of cases that had been reported, and the periods of their occurrence.

He furthermore reviewed the symptoms and morbid appearances of the disease in its different stages in the dog, and exhibited a drawing which represented a rabid animal in the advanced stage of rabies.

Considerable space was devoted to the disease as it affects other classes of animals, by which it was shown that it is by no means peculiar to the dog, but that all of the domestic and many wild animals, and even birds, have at one time or another been affected with it.

The latter portion of the paper was devoted to a consideration of the means for preventing the spread of the disease. The method at present in operation in New York, viz., requiring dogs to be muzzled, Dr. Russel considered to be the least effective, since, as the statistics showed, it is enforced at a time of the year when dogs are least liable to the disease, and moreover does not practically amount to protection even of the owner of the animal, since the muzzle is only worn in the street, while at home it is removed. After speaking of a number of plans, the one which was advocated in the most decided manner was that of requiring the owners of dogs to procure a license which should be renewed annually for dogs above a certain age; of requiring that all dogs should wear a collar carrying the name and address of the owner and the number of the license; of instructing each dog-owner in the symptoms of rabies, and requiring that every sick dog should be submitted for the inspection of an expert who should be a municipal officer.

DR. GARRISH emphasized especially the points that the affection was common among, or entirely confined to pet animals; and that the period of latency of the disease in the human subject had been known to extend to twenty years.

PROF. JOHN C. DALTON was requested by the President to favor the Society with his extensive experience in the matter, and remarked that although he would gladly speak, it was a mistake to suppose that he had any practical knowledge of hydrophobia. He was sorry to say that he had never seen a dog which he knew to have hydrophobia, although, in a very intimate acquaintance with the animal, he had seen him and experimented on him under a great variety of circumstances, and had seen a number which had been *said* to be mad, but which, on careful examination, were proved to be sick of some other disorder—such, for example, as epilepsy.

He then gave a very graphic description of a case of this sort which he had seen the day before, in which a whole neighborhood had been excited by the strange behavior of a terrier dog which was lying quietly in the gutter, suffering apparently from some disturbance of the nervous system. Two policemen were summoned, and after the dog had been treated to a douche bath with a bucket of water—for what reason the doctor did not know—he was killed by a blow on the head with a policeman's club.

The amount of fear exhibited by the spectators on this occasion was characteristic of this affection, and the doctor confessed to having shared it in some degaee at the time; and although perfectly aware that the dog was not rabid, he would have objected most decidedly to handling him. It is, no doubt, a fact that the great interest which attaches to the consideration of this disease is to be attributed not only to the dreadful character of the symptoms, but also to the uncertainty regarding the time of their accession.

He agreed with Dr. Russel regarding the importance of precautionary measures and the necessity for more accurate general knowledge of what should be done in the way of therapeutics when persons had been bitten; since it was frequently some time before a surgeon could be obtained, and, as often occurred, the animal which had inflicted the bite may have escaped, it became a matter of impossibility to say whether the dog was really rabid or not. The three to nine months of uncertainty which must follow in these cases was of itself one of the most dreadful features of the malady.

He was much interested in the doctor's suggestion that instead of requiring dogs to be muzzled, the owners of them should be required to pay a tax and keep a collar marked with the license number and owner's name attached to the dog's neck. If then all dogs found without such evidence of ownership should be systematically destroyed, we would possess a guarantee that the dogs which existed would be under the observation of an owner. If then information with regard to the symptoms of hydrophobia was made general, and owners should be required to take their animals to some place where they could be examined by an expert, we would have a better means of preventing the disease and its consequences than we have heretofore possessed, or more likely to have, through an ordinance requiring the use of a muzzle.

The public have an idea of three cardinal points in the question of a dog having hydrophobia or not, and he need hardly say that all three of them were wrong. 1st. They think that dogs have the disease only in hot weather. 2d. *Hydro*-phobia they consider an invariable symptom; and 3d. They have an idea that a rabid dog is always savage and aggressive.

The opinion on this matter was so general and decided that he had frequently seen something like this occur in the streets:—A dog would be seen trotting along the street having something strange about his gait or general appearance, and the passers-by would turn and watch him anxiously until seeing him stop to drink out of some pool in the road, and noticing that the weather was cool and that the dog did not attack anybody, they would turn with a sigh of relief and go on, having settled in their minds that it being cool weather, that the dog lapped water, and that he was not aggressive, therefore he could not be rabid.

Owing to the faulty nature of the public information on this subject, he had no doubt that many wounds had been contracted from animals who had not been noticed to be diseased, and he therefore hoped that Dr. Russel's paper might be condensed into such a form that it might be published by the Board of Health for circulation about the city—especially in police stations and like public places.

With regard to the shyness which had been spoken of as characteristic of the early stages of rabies, Professor Dalton's experience had been that *all* sick dogs are shy. When a dog has an inflammatory disorder or even derangement of the digestive system, his instinct leads him to go to some hiding-place and stay there. The rabid dog has this symptom in the earliest stage; but the difference in the case of rabies is, that the rabid dog is restless and remains for only a short time in one place.

Another point in the diagnosis of rabies is, that the appetite is not lost, but is depraved, and the diseased animal will eat his own dung, bits of wool, mortar, and pieces of charcoal. He gnaws furniture, and tears up and swallows bits of clothing, carpeting, etc. The speaker was aware that small pets would frequently tear and destroy furniture and clothing, but they would not swallow the pieces. This symptom is so diagnostic that Youatt says that when he finds masses of wool or pieces of charcoal in the stomach of a dog, he does not hesitate to affirm that the animal has had hydrophobia.

These symptoms of restlessness and depraved appetite Prof. Dalton thought would be of most practical value to the public, and there should be an ordinance obliging persons owning sick dogs to carry them to some place where they could be kept under intelligent observation.

One point which had been alluded to by Dr. Garrish would be ludicrous if it were not connected with so serious a matter; that was, the disposition on the part of the public to kill at once any dog which had bitten a person, or which had been suspected to have rabies, without waiting to see whether the dog was really rabid. The dog once dead, nobody knows or can know the truth of the matter, and the bitten person is condemned to months of torturing uncertainty.

This disposition to kill the dog at once had evidently some foundation in a superstition that in case the beast should ever in future become rabid, the person bitten would be attacked with hydrophobia. The absurdity of this belief renders comment unnecessary.

Prof. Dalton expressed it as his opinion that nineteen out of every twenty dogs reported to have hydrophobia are only epileptic, and that the killing puts it out of our reach to establish the fact, and tends to increase the popular prejudice in the matter. In fact, he believed that the greater part of the terror which exists regarding hydrophobia is based upon popular prejudice, and has no warrant in facts.

Dr. Garrish cited several cases, in one of which a hydrophobic patient never refused water and had no difficulty in drinking. The spasms of the muscles of the throat and chest were relieved by bleeding; twenty-four hours before the death of the patient the voice of the patient imitated the voice and bark of a dog, and symptoms of meningitis supervened.

Dr. Calkins believed that cases had been cured. M. Bouisson had the disease, but under the influence of a vapor-bath at a temperature of 93° the severity of the symptoms declined and ultimately passed off. Another cure had been reported by Dr. Rosseau in which a faradic battery of thirty-five plates [?] had been employed, and the patient recovered. Dr. Calkins thought he would employ both remedies if he should have a case. The great thing, however, is prophylaxis, and he cordially endorsed what had been said by Dr. Russel and the previous speakers with regard to the desirability of measures for the prevention of the spread of the affection.

As regards the immediate treatment of the wound, nothing could be better than actual cautery. With an iron at a white heat, the pain was trifling. A favorite mode with Larrey of producing cautery, was with boiling oil. Dr. Calkins also discussed briefly the question whether the disease could ever be of spontaneous origin, and whether its spread could depend upon the liability of other animals than the dog to its attacks.

Dr. Caro gave his opinion that a very common cause of the disease in the dog is bad quality of food.

The Society then adjourned.

Original Lectures.

CLINICAL LECTURE ON CLUB-FOOT.

By LEWIS A. SAYRE, M.D.,

PROF. OF ORTHOPÆDIC SURGERY IN BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

(Phonographically reported for THE MEDICAL RECORD.)

GENTLEMEN:—The cases which I shall bring before you to-day will give occasion for some remarks relative to the very common deformity known as club-foot.

The first case, which you here see, is one of double congenital talipes varus. The child is now five months old, and the deformity has never been under treatment.

Here, at the very outset, we come in contact with the violation of an extremely important principle, which should influence the management of this class of deformities. The principle is, that the treatment of congenital club-foot should begin at the birth of the child. This principle has already been mentioned in my book upon club-foot; but I have found that it has not been announced with force sufficient to attract the attention which it deserves. As proof of this I have this day received a letter making inquiry with regard to the proper time for the commencement of treatment. *Treatment of these cases should be commenced the instant the child is born.* The busy practitioner may, perhaps, be excusable if he shall first see that the placenta is properly delivered, the third stage of labor completed, and the necessary duties of the lying-in chamber discharged; but, as soon as these duties are discharged, the feet of the child should receive attention, and the proper treatment instituted before the medical attendant leaves the house.

In cases of acquired talipes the same rule is equally important, and treatment should be commenced *immediately upon the receipt* of the injury.

The importance of this rule of management can at once be seen, if for a moment we refer to the most serious obstacles which stand in the way of successful treatment of talipes. In brief, these are structural changes which the muscles are liable to undergo from neglect in the performance of their normal action, and the effects attending an inflammatory process set up in the various soft parts in consequence of the irritation produced by walking with the foot or feet in an abnormal position. In a large majority of instances, if proper attention is paid to the correction of the deformity, from the birth of the child onward, the foot can be made to maintain the normal position without the aid of tenotomy.

How is this to be accomplished?

Take the deformed foot in your hand, as you see me do in this case, and, by gentle manipulation and careful tension gradually increased, accompanied, perhaps, with light frictions to the foot and leg, bring it into its normal position. This manipulation should be repeated at intervals of a few minutes, until the foot can be *easily* placed in the normal position. When this can be done the foot is to be secured in that position by means of adhesive plaster applied in the following manner: In the first place, the most serviceable adhesive plaster to be used in these cases, and in all cases where it is desirable to sustain long-continued traction, is Maw's moleskin plaster, manufactured in London. Plaster spread upon canton flannel may be used, but it is not nearly as good as the "moleskin plaster."

Now, cut a strip of adhesive plaster two or three inches wide, and of sufficient length to go nearly around the foot and reach some inches above the upper extremity of the tibia. The plaster is to be applied by commencing upon the dorsum of the foot, with one extremity placed at an oblique angle, so that it may be wound around the foot smoothly in the direction in which the foot is to be drawn. When the plaster has been wound nearly around the foot, care being taken not to completely encircle it, then place the foot as nearly as possible in the normal position, and carry the plaster up the leg to the head of the tibia, and secure it by means of a well-adjusted roller bandage. When the bandage has reached the head of the tibia, the strip of plaster which extends some inches above must be removed, passing down the leg, and then the bandage is to be removed and made to follow it, securing the plaster in such a manner as to prevent all slipping. It is also advisable to nick the edges of the plaster over the ankle, lest free circulation should be interfered with.

If this plan of treatment is faithfully carried into execution, and continued in the same manner as necessitated in the proper carrying out of all other plans, if you would make them successful, it will in a large number of cases effect a complete cure.

There are, however, certain cases which will require a little more energetic and independent method of treatment than that which we have just described. There are cases in which the muscular rigidity is so well developed that it will not readily yield to the manipulation which can ordinarily be applied and *continued.*

Under such circumstances no more efficient apparatus can be employed for overcoming the deformity than that suggested by Mr. Barwell, of London.

The main principle involved in the apparatus is the application of constant tractile, elastic force for the purpose of overcoming muscular rigidity. The application of the constant elastic force is made by means of what have been designated as artificial muscles, which may be constructed and applied in the following manner:

Cut a fan-shaped piece of adhesive plaster, and attach to its narrow extremity a wire loop with a ring in the top.

Slit the plaster into strips at its wide extremity, and adjust it to the foot in such a manner that the wire ring shall be placed at the exact point at which you wish to make the *insertion* of the artificial muscle. Secure the plaster thus adjusted, by means of other strips of adhesive plaster and a smoothly applied roller bandage. The artificial *origin* of the muscle is made by taking a plate of tin or zinc, about two-thirds the length of the tibia and one-fourth the circumference of the limit in width, and carefully shaping it until it shall fit the curved surface of the limb. At the upper extremity of the tin or zinc plate is fastened an eye, made of wire, which is subsequently to receive one of the hooks attached to the artificial muscle.

To prepare the plate so that it can be securely attached to the limb, cut two strips of plaster, long enough to go around the limb, and in the middle of each strip cut two slits equal in length with the width of the plate. When the plate is introduced into these slits, and applied to the limb, and the strip of plaster carried around the limb, all lateral motion will be prevented. Then cut a piece of plaster somewhat wider than the plate and about double its length. Apply this smoothly to the side of the leg upon which the traction

is to be made, beginning as high up as the tuberosity of the tibia.

Now apply the tin plate, placing its upper extremity nearly upon a level with the upper extremity of the plaster, and then secure it by encircling the limb with the strips of adhesive plaster before described. Now, turning the piece of plaster first applied to the limb over the plate, cutting it off just underneath the eye at the top, secure the whole with a roller bandage. When the top of the plate has been reached with the bandage, reverse it, and carry it down the limb until the whole is properly secured. A short piece of small chain is then attached to the eye in the plate or to the ring of the other part of the apparatus. The artificial muscle is made by fastening hooks into the extremities of small pieces of India-rubber tubing, one-fourth of an inch or more in diameter, and from two to six inches in length.

The hook at one extremity of the artificial muscle is now attached to the *insertion* of the muscle, and the hook at the other extremity is attached to the short piece of chain. By placing the hook in different links of the chain, the amount of tractile force may be varied according to the requirements of each case.

(A more complete description and illustration of this apparatus can be seen in the second edition of the author's book upon club-foot.) A great advantage of this plan of treatment is, that it encourages movements in imitation of the natural movements of the parts. At the same time it permits the natural movements of the joints and muscles to go on unrestrained. The joints and muscles of the human body were designed by the Creator of all things for active motion, and as far as is possible these natural movements should be retained, stimulated, and strengthened.

It is for this reason that I always condemn any apparatus devised for the cure of these deformities which places the foot in a fixed position.

The deformity is essentially a paralytic one, and the treatment of cases of paralytic deformity by retention in a fixed apparatus is all wrong. Such apparatus, therefore, as plaster-of-Paris, gutta-percha, or shoes made with a certain set of iron fastenings and screws, by means of which the foot is held in a certain fixed position, is all wrong.

What will be the result of such a fixed apparatus if worn for any considerable length of time? The inevitable result will be that these muscles which are kept quiet will undergo structural changes, which will place them beyond all hope of ever again being able to perform their normal function.

This is a very important principle, and one which should influence your management not only of this class of cases but very many other cases when it becomes necessary to apply measures for overcoming muscular contraction, or to retaining the muscles in a state of rest for a certain length of time, as in the treatment of fractures. The total rest which must necessarily occur in a muscle, when secured in some fixed apparatus, will certainly induce fatty degeneration of the muscular structure if long continued, and thereby destroy all possibility of ever overcoming the deformity by the restoration of normal muscular power. One great idea, therefore, in the plan of treatment which we recommend, is the permission of motion at the ankle-joint and among the muscles. In addition, these muscles should be stimulated to action by means which are hereafter to be mentioned, as much as can be done within the bounds of discretion, and without producing over-fatigue. There are certain objections which can be urged against the apparatus just described, such as, the liability of producing irritation of the skin, a serious objection, especially among small children; the liability of the plaster slipping about, becoming worn out, requiring frequent adjustments, especially in warm weather, etc., etc.

For the purpose of overcoming these objections, and at the same time making use of the same principle as far as possible, I have devised a shoe, which is constructed upon the general plan of "Scarpa's shoe." The essential difference between the two instruments is, I make use of rubber tubing or elastic bands for the motive power, instead of the ordinary springs used for that purpose. I have also made the additional modification of substituting a ball-and-socket joint opposite the medio-tarsal articulation, for the old hinge-joint which permitted of motion only in a lateral direction. The ball-and-socket joint will permit of motion in every direction. The sole is also constructed very much like that of an ordinary shoe, and has a low heel.

A complete description of this instrument and its modifications will be found in the second edition of my manual upon club-foot, and I will therefore not consume more of your time in its description at this place.

The next important question to be decided is, How are we to determine whether, in any given case, we shall be compelled to cut or not?

The law is, if while the patient is anæsthetized, a part contracted so as to produce a deformity—whether it be muscle, fascia, or tendon—can be overcome by manual tension gradually applied, and brought to its normal position and retained there, and then, if an additional point of pressure, made with the point of the finger or thumb upon the parts rendered tense, *produces reflex contractions*, that fascia, muscle, or tendon must be cut.

If, on the contrary, you can bring the parts into their normal position by manual tension gradually applied, and the additional point of pressure does *not* produce reflex contractions, the deformity can be permanently overcome by constant elastic tension, and the more cutting the more damage there is done.

This is an important law, which you will do well to remember; for its application is universal in deciding the question of cutting contracted tissues.

Suppose it is decided that the operation must be performed, how is it to be done?

In the first place, a properly made tenotome instrument should be employed, if you would avoid the risk of wounding important structures. The instrument should be somewhat rounded at the point, and have a double bevel like a wedge, so that when introduced it splits rather than punctures the tissue through which it passes.

The cut is to be made subcutaneously, introducing the tenotome flatwise, splitting the theca and carrying it beneath the tendon or fascia, turning its edge upwards, and then pressing the tissue to be cut down upon the edge of the instrument, while at the same time a teetering or slightly sawing motion is given to the blade until the tendon or fascia is felt to give way. When the cut has been made, the instrument is turned flatwise and withdrawn. The thumb with which pressure has been made is passed over the wound, which is then immediately covered with a piece of adhesive plaster. A little pad of cotton is then placed over the wound, and the foot firmly bandaged. Next, immediately restore the foot to its normal position, and retain it there. Do not wait a few days for inflammatory action to take place and subside, but restore it at once, and apply an apparatus for retention, which shall be constructed as follows:

First, apply a *guy* or a strip of adhesive plaster in the

same manner as already described in the first treatment the congenital talipe should receive.

Next, cut a piece of board a little longer than the foot, square at the toe, shaped by the sole of the foot, and about two or three-eighths of an inch thick. (Cigar-box answers a good purpose.)

Cover the board with a piece of adhesive plaster equal with it in width, and sufficiently long to pass entirely around it, and reach from the toes to some inches above the knee.

Apply the adhesive side next to the band, commencing at the anterior extremity, upper surface, returning from the posterior extremity along the under surface, thus leaving the remaining portion of the plaster in the proper position to be subsequently attached to the anterior surface of the leg. The apparatus is now ready. Now, bring the foot into its normal position as nearly as possible by careful manual manipulation and traction, and then set it upon the board, securing the heel by a strip of plaster which passes around the ankle and heel part of the board, and then secure the whole by a well-adjusted roller, which is to be carried over the foot and above the ankle. Again, bringing the foot as near as possible into the normal position, the long strip of adhesive plaster is to be firmly drawn up and attached to the anterior surface of the leg, and then secured by a continuation of the roller bandage, which has already reached above the ankle. When the head of the tibia has been reached, the plaster is to be reversed, carried downwards upon the leg, and followed by the roller, which will secure the entire dressing more firmly in its position. If there is a tendency, after the dressing is applied, to either valgus or varus, an additional *guy* can be applied in a manner to overcome such tendency, and secured with another roller.

This apparatus is simple, cheap, and more efficient than any which I have ever employed.

Now, gentlemen, we come to the important part of the management of these cases, namely, the after-treatment.

The mere cutting operation is the most insignificant part of the treatment, so far as cure is concerned. The cutting may be necessary, but the deformity must be treated afterwards in the proper manner, if you would have any benefit follow, save the treatment from falling into disrepute and yourself from being regarded as a man of questioned ability.

After three or four days the external wounds will be healed, and as soon as that is the case the foot is ready to receive a variety of passive movements, which are to cure the deformity. Handling the foot, gentlemen, is the great secret of curing it. Here is a little boy who has had his foot cut five or six times, and yet he comes to-day with his deformity as bad as ever, and why? Simply because the treatment which he has heretofore received after the operation has been by means of fixed apparatus, which was regarded as sufficient. The parts have been permitted to remain in a quiescent condition, and adhesions have occurred which renders the case as bad as it was before the operation.

Without manipulation the result will be exactly what you see here. Everything has been cut, but no proper after-treatment following, only a few months elapse before everything is as bad as it was previous to the operation, in consequence of the adhesions which have been formed. The more frequently the child's foot is manipulated, the greater will be the benefit derived from the operation, providing the manipulation is performed thoroughly but gently, and never carried to over-fatigue. Friction with the hand is also very serviceable among the means to be employed for restoring motion to the paralyzed muscles. Electricity is another means; but I have a few directions to give you relative to the employment of this agent, which I regard as being of the utmost importance. When employing electricity for the restoration of paralyzed muscles, be careful that you do not apply it too long. Three or five minutes every day, or every other day, is sufficient.

Be careful that you do not apply it too strong. A strong current is very liable to cause over-fatigue of the muscles, and this is especially the case if too long continued in the treatment of paralyzed muscles; and the over-fatigue induced will be positively injurious. *Over-fatigue* of the muscles must be assiduously avoided. Another exceedingly important point with regard to the application of electricity for the purpose of restoring muscular action is always to restore the muscle to its normal position by some artificial means, approximating its origin and insertion before applying the battery.

The principle is, the paralyzed muscle should be placed in such a position that, when stimulated to contract by the application of the electric current, it can do so *without carrying any weight.* If the muscles are compelled to act without exercising these precautions, permanent damage may be done to them, rather than permanent benefit. You will always recollect, therefore, to approximate the origin and insertion of all paralyzed muscles, bringing them as near as possible into the normal position, before applying the electric current for the purpose of restoring lost muscular power.

The administration of $\frac{1}{60}$ gr. doses of strychnine three times a day, and the subcutaneous injection of $\frac{1}{60}$ of a grain into the muscle once in eight or ten days will also be of much service.

The deformity, depending as it does upon a paralyzed condition of certain muscles, renders it necessary that the treatment shall be continued until the muscles have become so restored that they can act in obedience to the will of the patient. Until that time arrives the deformity is not cured. This, as you readily see, will require time for its accomplishment. It will be necessary, therefore, to give some artificial support to the muscles, until recovery has been so far established that the patient can voluntarily place the deformed foot in its normal position. Barwell's apparatus, or the shoe already described, should therefore be employed to assist the movements of the muscles until they have become thoroughly accustomed to the performance of their normal functions.

UNUNITED FRACTURE OF THE THIGH TREATED BY THE INJECTION OF AMMONIA.—Bourguet has reported a case in which he has employed this treatment with success. A fracture of the diaphysis of the femur had not united after a period of five months. At this time 10 drops of a solution of ammonia, in the proportion of 1 to 3, were injected into the thigh, immediately about the extremity of the upper fragment. Four weeks later, 20 drops were injected about the lower fragment. Three days later a third was made between the fragments, and a week later a fourth of 20 drops, containing equal parts of ammonia and water. Within the next five weeks four injections were made with a solution of iodine and iodide of potash. The leg lay in a water-glass splint. The phosphate of lime was given internally. Six months after the first injection the consolidation was complete and the callus very extensive. This is the second case that Bourguet has treated successfully in this way.—*Allg. Med. Central Ztg.*, 39, 1874.

Original Communications.

ELECTRO-THERAPEUTICS OF THE MALE GENITAL ORGANS.

By A. D. ROCKWELL, M.D.,

ELECTRO-THERAPEUTIST TO THE NEW YORK STATE WOMAN'S HOSPITAL.

In the consideration of disease the intelligent practitioner is first required, so far as possible, to clearly apprehend the indications, and then as nearly as may be to meet them by his remedies. In certain disorders —and these constitute not a small proportion—the indications are often uncertain, and therefore unsatisfactory, and necessarily lead to empiricism. In other diseases the indications are most clearly defined, and the only difficulty is to find some remedy or method that will adapt itself to them and thus hasten recovery. In anæsthesia, the cry of the sensory portion of the nervous system is for a direct and peculiar form of stimulation to the nerve-centres, along the course of the nerves, or to their peripheral expansion.

To meet the first indication (where the nerve-centres are involved), central galvanization is not unfrequently of essential service; localized galvanization or faradization is called for in the second condition; and where the peripheries alone are in fault, faradization with the wire brush is usually beneficial. In paralysis of a motor nerve we desire in the same way to stimulate either the nerve-centres or the nerve itself, and substantially the same method of procedure may prove of service. Most admirably do some pathological conditions of certain of the nerves of special sense serve as illustrations of this principle. In anosmia, or loss of the sense of smell, similar indications are afforded as above; so also in impairment of the sense of taste, and in many cases they are as successfully met by the same method of treatment.

A nerve is in a condition of heightened irritability; there are disturbances of circulation dependent primarily on a perverted or weakened influence of the great sympathetic, and secondarily on disturbance of the vaso-motor nerves.

Muscular atrophy is making rapid progress through lack of nerve nutrition, and certain secretory and excretory organs fail to properly perform their functions for want of a sufficiently stimulating influence. In all these conditions the indications are positive and sufficiently well defined, but with perhaps the exception of the last, in which the symptoms are sometimes met by internal medication, the treatment by the old and accepted methods affords but an uncertain and unsatisfactory prognosis. Electricity, however, in one or another of its manifestations, or by some one of its varied methods of application, excellently meets all these requirements, and accomplishes what with our present knowledge and methods would be impossible without it.

All this applies equally to the diseases which this paper proposes briefly to consider.

In spermatorrhœa, seminal emissions, and impotence the indications are often sufficiently clear and well defined; but the one great difficulty has been to find a remedy that can reach and successfully fulfil them. The remedy that I offer is, again, electricity, and it is offered not only on the ground that it has practically equalled the expectations that it held out, but that, theoretically, it ought to be of service. In the first place it must be remarked that of these three conditions, viz.: spermatorrhœa, seminal emissions, and impotence, the latter, taking the cases as we find them, yields the most uniformly and readily to the treatment that we are considering. These three conditions are, however, very frequently associated, and the symptoms suggestive of each may be so intermingled as to render it difficult to decide which presents the most prominent features for treatment.

There can be no question that true spermatorrhœa is much less frequent than is generally believed,

It consists in an involuntary discharge of semen, without erection, and as there are several secretory glands besides the testicles, the secretion from which lubricates the urethral canal, and may appear externally even in a healthy condition of the parts, the activity of charlatans has had a fair field in which to excite alarm among the credulous.

In regard to the treatment of spermatorrhœa, it is hardly necessary to say that no one method of electrization will answer in all cases.

The applications may be localized externally or internally, and in addition we frequently use with advantage general faradization, sometimes central galvanization even. There is one method of procedure, however, concerning which I have positive convictions. I refer to galvanization of the ejaculatory ducts, or the parts in their immediate vicinity, by means of the insulated catheter electrode. It is true that if employed with great caution and with a current of very slight tension no harm may result. Currents of considerable electrolytic power even may frequently be borne without any after ill effects; but it is equally true that these same applications, whether weak or strong, have in numbers of instances been followed by profound and lasting irritation, and in my hands I am not satisfied that it ever accomplished good in true spermatorrhœa. Deaths have been known to result from the effects of the porte-caustique, and doubtless most of us have knowledge of cases in which it has produced inflammation or chronic irritation. From the history of one case at least, it seemed sufficiently clear to me that this treatment had laid the foundation of an obstinate stricture; and in another case, of complete destruction of the virile power, which I saw with Dr. Jerome Smith, it was evident that the symptoms were in a measure due to a most severe and ill-advised cauterization of the ejaculatory ducts. Electrolytic action is of course more completely under control, and although its physiological influence is different from that of the caustic, it is yet occasionally followed by substantially the same effects, and I hesitate to make use of it internally in the irritable condition that we are considering.

In lieu of this procedure, however, and in addition to the external methods of treatment, I am highly in favor of the direct application of the faradic current to the urethra, and on the same principles and to meet the same indications that the occasional introduction of the ordinary catheter is attempted.

Mechanical pressure alone tends to unload the congested capillaries, and to very decidedly lessen the sensibility of the urethral nerves, and, when combined with the vibratory action of the faradic current, I am convinced that its good effects are markedly increased.

Seminal emissions consist in an involuntary discharge of seminal fluid, with erection, and demands treatment only when it becomes excessive, and is associated with, is dependent on, or is the cause of constitutional disturbance. Unlike spermatorrhœa, impotence in its various grades of impairment of the sexual power is of very frequent occurrence; indeed is present far more universally than is generally supposed. So far as my experience goes, it would seem that the mildest

and most frequent form of impotence manifests itself by a premature ejaculation of semen, with no special diminution of sexual desire, but with some impairment of the power of erection. A somewhat more persistent condition is shown by an appreciable diminution or capriciousness of the sexual appetite, with a *marked* decrease of the power of erection; and thirdly, there is not unfrequently an entire absence of sexual desire and power of erection. I shall not attempt to enter into any consideration of the causation of these symptoms further than to say that the vast majority of cases of this character depend on the same general cause—overtaxation. Not only in its incipient, but in its more advanced stages, impotence not unfrequently is the result of organic disease of the nerve-centres, and its treatment by electricity is of importance only so far as it serves as an illustration of the extraordinary stimulating or tonic influence of the remedy. I have had patients suffering from incurable chronic hemiplegia, progressive muscular atrophy, locomotor ataxia, etc., where there has been, under local and general electrization, a most extraordinary increase in the desire and capacity for sexual intercourse. As a rule this increase has been of a temporary character only, but occasionally the effects have been lasting. In one case of Addison's disease of the supra-renal capsules, where the desire and power had been completely lost for eighteen months, both were approximately restored by treatment. Now, in the consideration of the various degrees of impaired sexual power, the question at once arises, What are the indications; and again, how are these indications to be fulfilled? In the milder forms of impotence, where there is simply premature ejaculation of semen, with some diminution of the power of erection, as well as in the more advanced stages, where the desire is capricious and the power of erection pretty well destroyed, it is evident that there must be a degree of paralysis at the root of the disorder dependent on structural changes in the nerve-centres, or else this impaired power or tone in the muscles and erectile tissue may be of a purely local character. In the latter case the indications are clearly the same as in other forms of local paralysis, and by faradization of the ischio-cavernosus, bulbo-cavernosus muscles, etc., much may be accomplished.

In recent cases of impotence, where there is considerable power remaining, as well as in its more advanced stages, where the power is approximately lost, we not unfrequently find that the seminal secretion is markedly reduced not only in quantity but quality, and reasoning from analogy it would seem that in such cases there were undoubted indications for the use of electricity.

The galvanic current especially has the power of exciting to increased activity the secretory function of various glands, and not unfrequently accelerates physiological mucous discharges. The salivary and lachrymal glands, as well as the liver, are susceptible to stimulation by electrization, and it is undoubtedly true that the lacteal secretion has been augmented by passing the current through the breasts of nursing women.

It is highly probable, then, that a deficiency in the secretion of semen, when it is dependent on paralysis or exhaustion of the nerves controlling this function, and not on pathological changes of a structural character, may be successfully remedied by galvanizing the spermatic nerves and the testicles. We must not, however, in all cases depend on local treatment alone.

Not only may impotence be associated with, but it may result wholly from, disorders of a general character.

The excessive use of sedative narcotic remedies, sedentary habits, and general mal-nutrition from any cause lead to the condition under consideration, and demand the constitutional tonic influence of general faradization.

It is a fact worthy of note that some cases of sexual incapacity are associated with diminished electro-cutaneous sensibility of one lateral half of the penis. Occasionally the anæsthesia is quite profound, and as a rule the sexual weakness is in proportion to the degree of anæsthesia. The numbness in these cases is more than an accidental association; it would indeed appear as if it was a gauge, and to a certain extent a cause, for by the application of the ordinary electric brush to the parts, in the same way that we treat any case of local anæsthesia, the numbness is often removed and the integrity of the sexual function restored. Impotence, as before remarked, may manifest itself by many symptoms and in various degrees, but there is one phase of it that is, I believe, not very common.

It consists in an inability to ejaculate semen, while the power of erection remains vigorous, and to this condition the term aspermatism was first proposed by Roubaud, in 1855. Dr. Wm. H. Van Buren, in an article published in the *N. Y. Medical Journal* for November, 1868, suggested that the difficulty in ejaculating the semen was caused by an exaggerated spasmodic contraction of the muscular fibres of the walls of the ejaculatory ducts, leading to their occlusion under extreme excitement. On this theory it would seem that the indications called for galvanization of the ejaculatory ducts; but in two cases that have come under my observation, and that might fairly be placed under the head of this affection, the treatment failed to afford relief. Cases illustrative of the possibilities, as well as of the limitations of the electrical treatment of impotence might be abundantly given, but it is not my purpose to weary my readers with the dry details of a clinical report.

In order, however, to give to those who are interested in this subject an approximate idea of the measure of benefit that may be derived in the treatment of the various phases of this disease, it may not be amiss to state briefly the general results of my efforts. During the last three years, and in private practice exclusively, I have been enabled to thoroughly follow out the treatment of twenty-eight cases of impotence, in its various degrees, by some one or several methods of electrization.

Of these twenty-eight cases, eight failed to receive appreciable benefit; while twenty either recovered completely, or approximately, or were very greatly improved. Of the eight cases, most of them were from one to several years' standing, generally representing individuals approaching or beyond middle life, and, as a rule, the result of long-continued sexual excesses or repeated attacks of syphilis or gonorrhœa.

When the sexual power has once become very decidedly impaired through excesses, it is not to be expected that in general the old vigor will return in full strength, and therefore it can only be said of the twenty cases that were benefited, that the majority recovered approximately, but permanently; and it is only fair to add, that quite a number of them were of several years' standing, occurred in persons of middle age, and were the result of unusual excesses.

The symptoms that I have briefly considered are of real importance. More probably than any other manifestations of physical debility do they lead to deeply deplorable results.

In their wake follows that dreaded mental condition—hypochondriasis, which, when once it firmly

possesses a man, unfits him for every duty. As it has been doubted whether the resources of electro-therapeutics are capable of affording any decided and lasting benefit in these diseases, I here record not only as the result of my own experience, but from a knowledge of the experience of others, that no case in which there have been reasonable grounds for hope can be said to have been fairly treated until the proper applications of electricity have been attempted. The records, I am firmly persuaded, justify the assertion that of cases of impotence not dependent on incurable organic disease, the majority will not fail to be more or less improved by electricity in some of its forms or methods of application, even after the failure of the internal administration of medicine.

A CASE OF

TRAUMATIC PARALYSIS OF THE SUPERIOR RECTUS AND INFERIOR OBLIQUE MUSCLES OF THE EYEBALL,

WITH APPARENT ATROPHY OF BOTH OPTIC NERVES, TERMINATING IN COMPLETE RECOVERY.

By CHARLES S. BULL, A.M., M.D.,

ASSISTANT-SURGEON TO THE NEW YORK EYE AND EAR INFIRMARY, MICROSCOPIST TO THE MANHATTAN EYE AND EAR HOSPITAL.

The following case of injury to the head and spine, causing complete paralysis of the superior rectus and inferior oblique muscles of the eye, is one of peculiar interest, as there was associated with the paralysis of the muscles an affection of both optic nerves so perfectly resembling a progressive atrophy as seemed to demand an unfavorable prognosis, and yet resulted in a complete recovery of vision. The patient was a young man, 28 years of age, of a sallow, unhealthy complexion, a book-keeper by occupation, who was seen by the writer at the New York Eye Infirmary in November, 1872. Six weeks before I saw him he had fallen down a long flight of steps, and struck upon his back and vertex. He was taken up in an insensible condition and carried to a drug-store, where it was discovered that his right arm was fractured about half-way between the shoulder and the elbow. He remained unconscious for about an hour, and was then able to walk three blocks to a car, and rode home. He complained of feeling numb along the spine and lower extremities, but had no difficulty in walking, except from a feeling of vertigo. He also said that he could not see well, and complained of diplopia. During the six weeks that he was confined to the house with his fractured arm he suffered from no unpleasant symptoms consequent upon the fall, with the exception of the dimness of vision and the diplopia. When I first saw him there was nothing abnormal to be seen about his eyes, on a cursory examination, except a localized subconjunctival redness in the region of the inferior rectus muscle of the left eye. This, he told me, had been much more extensive, and had made its appearance soon after the accident. On testing the vision of each eye separately, I found that with the right eye he could read $\frac{20}{XX}$ of Snellen's types with some little difficulty, but with the left eye he could only read $\frac{20}{LXX}$. There was no improvement in either eye by any glass, spherical or cylindrical. The diplopia was still very annoying, so that he habitually kept the left eye closed. On examining him very carefully, it was found that he had paralysis of the superior rectus and inferior oblique muscles, so that with binocular vision there was not only vertical and lateral diplopia, but the image corresponding to the affected eye also stood inclined to that of the other eye.

The ophthalmoscopic examination showed a most interesting state of affairs. Both optic nerves were of a brilliant white color, as markedly discolored as we see them in cases of advanced atrophy. Their outlines were sharply defined against the red background, and the retinal arteries were reduced in calibre to mere threads: they were barely recognizable. The veins were, perhaps, a trifle engorged. There was no atrophic excavation of the optic papillæ, as we usually see it in advanced atrophy of the optic nerves; and its absence I explained by the short time that had elapsed since the accident. But there were two points in the case that I could not explain, viz.: First, the apparent rapidity of the course of the atrophic degeneration of the nerves, as evinced by their color, and the condition of the retinal arteries, without a single sign of any inflammatory process either in the nerve or eye; and, second, the remarkable fact that, with an apparently markedly atrophic nerve in the right eye, his vision was yet almost normal. The only explanation that occurred to me, to account for the rapid progress of the nerve degeneration, was that a hemorrhage had occurred from the central artery of the retina in the course of the optic nerve, which by compression had cut off the nutritive supply of blood to the nerve tissue, and it had consequently atrophied. There were probably also one or more hemorrhages at the base of the brain at the time of the accident, which had compressed the two filaments of the third nerve, which supply the superior rectus and inferior oblique muscles, and had caused paralysis of these muscles. Yet it would seem rather a curious coincidence that a hemorrhage should have occurred into both optic nerves; and the subsequent course that the affection ran went far towards rendering this explanation unsatisfactory. The result might have been traced to a fracture at the base of the skull, involving both optic nerves in front of the chasm, or both optic tracts behind it. But if this were the case the main trunks of both third nerves would have ruptured, and we should have had paralysis of all the ocular muscles supplied by these nerves, and probably also paralysis of the superior oblique and external rectus, owing to the fourth and sixth nerves being involved. Moreover, the patient did not have a single symptom of a fracture at the base of the skull. His hearing has never been affected, and since he recovered his consciousness after the accident he has felt perfectly well. I resolved to watch the case; and, by way of experiment, he was ordered to take the iodide of potassium in ten-grain doses three times a day, and carry it up to toleration. At the expiration of a month he went south, and while there the eyesight improved somewhat; but while there he fractured the same arm again, and during the necessary confinement the vision grew worse. While south he was bled several times from the left temple, but without any improvement to the vision or the diplopia. In April, 1873, six months after the accident, he came again to the Infirmary, and an examination showed the eyes to be in the same condition. He was then advised to go into the country and try some manual, out-of-door work, which he did, and remained there till the following year. In April of this year he presented himself at the Infirmary, with the remark that he was entirely well, but that his eyes became very soon fatigued when he used them for reading or

writing. On examining him, his vision in *both* eyes was normal, reading Snellen xx at 20 feet. His range of accommodation was normal, and the diplopia had entirely disappeared. An ophthalmoscopic examination showed a perfectly *healthy* pair of optic nerves, normal in color and outline, and the retinal arteries had *regained* their natural size and appearance. I dilated his pupils and paralyzed his accommodation, but could find no error of refraction to account for his asthenopia. There was no insufficiency of muscular power in any of the muscles, and I was entirely at fault to account for the asthenopia. He was ordered a pair of convex glasses, of 36 inches focal distance, to use for reading and writing, and, after a two-weeks' trial, has expressed himself satisfied with them.

The interest of the case centres in the obscurity of origin and very doubtful causation of the trouble, and in the complete restoration of the functions of the optic nerves, which at first were apparently undergoing rapid atrophic degeneration.

214 WEST 44TH STREET.

WOUND OF THE TENDO-ACHILLIS.

BY T. H. KEARNEY, M.D.,

PROFESSOR OF PRINCIPLES OF SURGERY IN THE MIAMI MEDICAL COLLEGE, CINCINNATI, OHIO.

IN THE RECORD of May 15th a case of incised wound of the tendo-achillis is reported by Dr. Geo. H. Mitchell. The notes of that case are so brief that, on some points at least, I find it difficult to comprehend it. The case is one of so much interest, and differing in its results so widely from such cases in general, that it is to be hoped Dr. M. will give it, at some future time, more in detail.

The following case has recently been under my own observation; and, it will be noticed, resembles Dr. Mitchell's only in the manner of its causation, but contrasts strongly with his in the progress of the reparative process. The coincidence of the two accidents happening in precisely the same manner strikes me as being very remarkable; for the occurrence of such an injury, happening in that particular way, would be strange even in a solitary instance.

Mr. B, about forty-five years of age, and in rather delicate health, being the subject of hæmoptysis, etc., was attempting to wash his feet at a stationary washstand. While standing on one foot, the other, which had been resting on the edge of the marble, suddenly slipped, and his heel struck the bottom of the porcelain basin with such force as to break through it and to divide the tendo-achillis against the edge of the broken ware. The basin, it may be stated, was previously cracked, a circumstance that contributed to the result. This happened on the 20th of November last, and I saw Mr. B. in a very short time after the occurrence. On examination there was found a transverse wound, about an inch and a half in length, and situated just above the point where the tendon becomes free from attachment to the bone. There had been moderate bleeding. The tendon was completely and smoothly divided, and its upper cut extremity was retracted to the extent of about one inch. The cut surface of the lower extremity presented itself in the wound. Relaxation of the gastrocnemius by flexion at the knee, and full extension of the foot, allowed of the close approximation of the divided ends. The limb was therefore secured in this position by an anterior splint, and the wound closed by a few interrupted sutures and strips of plaster. Nothing more seemed necessary, and therefore the question of using sutures in the tendon itself was not considered. A simple evaporating lotion was ordered as soon as inflammatory heat began to be manifested. The splint was replaced by strips of plaster attached to the sole and instep, and connected by tapes with a collar of plaster encircling the limb just above the knee. A very moderate degree of inflammatory action took place, the tenderness extending upwards, probably, throughout the whole extent of the sheath of the tendon. The amount of suppuration was very limited, and the healing of the wound proceeded quite satisfactorily, though slowly. The maintenance of the relaxation of the muscle, by the means already mentioned, and the accurate coaptation of the ends of the divided tendon, by compress and plaster, constituted the main objects of the treatment. Slowly but steadily the injury was repaired, and on Feb. 12th I made my last visit and inspection of the part. Then the wound was entirely healed, and Mr. B. was moving around with the aid of crutches and a high heel to his shoe. A few days since I met him on the street, walking without the aid of a cane even; and only complaining of some remaining slight limitation in the movements of the joints. This result I should regard as highly satisfactory if I had not read the account of Dr. Mitchell's case. Professor Gross says of such injuries that reunion of them "will certainly seldom take place under any circumstances, however propitious." Had I reported my case a few weeks sooner, I might have been led into the use of a somewhat boastful tone. But in view of the history of a similar case, which sets forth the facts that on the fifth day "the patient rises on a cane," and "attends to business and other duties" on the seventh, I am bound to record my patient's weeks of tedious recovery with becoming modesty. What, it may be fairly asked, was the condition of the parts in Dr. Mitchell's patient at these early periods? Could there, possibly, have been any organization of the reparative material sufficient for the restoration of the function of the injured part in any degree? For these are points which cannot be determined from a reading of the brief account given. Paget and others have demonstrated the prompt repair of divided tendons in rabbits, when the section was made subcutaneously and carefully. But results fully equal to those are hardly to be expected in man; and particularly do the results following carefully performed subcutaneous section differ from those that attend open wounds, more particularly when these latter injuries partake somewhat of the nature of lacerated wounds. It will be noticed that Dr. M.'s case was attended with "copious arterial hemorrhage," such as required a resort to "torsion and styptics" for its control. Now, such treatment of a wound, of course, forbids all possibility of any form of prompt or speedy union. The case appears to have been reported on "the thirteenth day after the injury;" and perhaps I may be permitted to suggest that the actual result could hardly have been determined so soon; and on the other hand, a very interesting postscript might be written.

The author of the report asks the questions, "Is this result exceptional? And what would be the effect of bringing the cut ends together by silver sutures?" If I may presume to reply, I will say in answer to the first, that, in the light of recorded experience it is, most assuredly, "exceptional;" and as to the second interrogation, would it not be like painting the lily to attempt any further improvement on such a result as he has obtained.

CINCINNATI, *June* 9, 1874.

Reports of Hospitals.

BELLEVUE HOSPITAL.

Notes of Practice and Peculiarities in Treatment.

First Surgical Division.

Dr. Brooks, House-Surgeon.

The first bed we visited contained a patient, female, æt. 40 years, who had received an extensive lacerated wound of the leg produced by the wheel of a street-car. The limb was lying in a fracture-box; sloughing was abundant, and every effort possible was being made to get her general condition up to the amputating point. Her stomach, inclined to be irritable, was left at rest as much as possible from the perturbating influence of remedies. Quinine was administered hypodermically in the form of Lente's solution. This form of solution is employed for the purpose of preventing the formation of abscesses, having never been known to produce an abscess in this hospital.

The following is the formula for its preparation which varies, but not essentially, from the formula published by Dr. Lente:

℞. Quinine Sulph. grs. l.
Aquae.... .. ʒ i.
M.

To this add sulphuric acid drop by drop until the solution clears up, and then add ♏ iv. of alcohol and grs. iv. of carbolic acid. In preparing the solution, first heat the water until it vaporizes; then add the quinine, clear the solution with the acid, and then add the alcohol and carbolic acid. Thirty minims is equal to between two or three grains of quinine, and was administered to this patient two or three times a day. The remark was made that the effect of such a dose, administered hypodermically, was sometimes equal to that produced by ten grains of pure quinine.

PENETRATING WOUND OF THE ABDOMEN.

A man had received a wound in the abdomen produced by a ball from a pistol. The ball had struck the abdominal walls about half an inch above the umbilicus, and nearly in the median line; passed obliquely through the muscles, and entered the abdominal cavity. Well-marked peritonitis was developed within three hours from the reception of the wound. Twenty-four hours after the reception of the wound the peritonitis was very violent indeed. Opium had no controlling effect, although administered in heroic doses. Post-mortem revealed perforation of the pyloric extremity of the stomach.

NECROSIS OF FIBULA.

A very large portion of the fibula had been removed. The operation had been performed after blanching the limb by the application of Esmarch's bandages, and was done with as much ease as it could be performed upon the cadaver.

COLLES'S FRACTURE.

A case of this description was noticed, which was dressed by the application of splints about four inches in length and secured by adhesive plaster. This is a method of dressing this form of fracture not infrequently adopted in the Division, and the results obtained are equal to those obtained by any other form of dressing. Pistol-shaped splints are not used at all, or any special attention paid to placing the hand in that peculiar position.

CUT THROAT.

This patient had made the ordinary incision from ear to ear, hoping thereby to do himself and his country a favor, but, as is usually the case, his efforts were not crowned with success, and he was brought in for treatment. These cases are treated by first bringing the edges of the wound together and securing them with sutures, if the trachea has not been opened. When the trachea has been opened the wound is left to take care of itself, for experience has taught that the cases do much better than when those wounds are closed with sutures. They are permitted to heal by granulation. Closure of the wound is unsafe, because of the liability of pus producing fatal results. It may be that, after the lapse of several months, a small fistulous opening will remain, that may require closing. These are the principles which govern the treatment of this class of cases in this Surgical Division.

REFRACTURED THIGH.

The patient had been in bed five weeks, and had extension maintained by means of Buck's extension apparatus. The fragments were held in apposition and supported by light lateral splints. The special point of interest was the amount of weight that had been applied and the length of time it had been continued without producing apparent deleterious results.

Thirty-two pounds had been applied and continued for more than a week.

The shortening, which was nearly two inches before the bone was refractured, had been reduced to less than one inch.

SYNOVITIS.

A good result was noticed in a case of this character, which had been treated by means of compressed sponges. Apply dry sponges over the joint and bind them down by means of a roller bandage. Then wet the sponges, and an equable support and pressure is maintained around the joint, which promotes absorption of the fluid, and in very many cases contributes to a rapid recovery.

PISTOL-BALL THROUGH THE BRAIN.

This case was remarkable from the fact that aphasia did not occur until 48 hours after the wound had been received. After aphasia was developed, intelligence remained and continued for some hours.

When post-mortem was made, it was found that both anterior lobes had been destroyed. The third anterior convolution upon right side was entirely destroyed, and upon the left side softened and broken down.

HIP-JOINT DISEASE AND WAXY DEGENERATION OF INTERNAL ORGANS.

Several months ago this lad, who had long suffered from hip-joint disease, begged of the visiting surgeon to operate upon his hip so that he might have a little ease from his sufferings before he died. The appeal was too strong for resistance, and the operation of excision was performed. At the time of the operation there were evidences of waxy kidney, the liver was enormously enlarged, and, in all probability, waxy, and altogether he was in a most precarious situation. Improvement in his general condition began at once after the operation. The wound in the hip is nearly healed. His liver has diminished in size very much, and the waxy changes in the kidneys are apparently arrested. He is in and out of the hospital daily, and is constantly improving. The practical lesson to be learned from this case is, that operations for the removal of dead bone or accumulation of pus are not

contra-indicated by the presence of waxy degeneration of the internal organs.

Medical Division.

HYDRO-PERITONEUM.

During our visit to the hospital to-day, we noticed, first, the patient who had had paracentesis abdominis performed upon him nearly two months ago. The accumulation, when the operation was performed, had been of only about six weeks' standing. Since the operation there has been only a moderate accumulation of fluid, and the man is feeling remarkably well. He is regarded as a standing evidence of the propriety of performing the operation *early*.

Another case of the same kind was noticed, that possessed features of interest. There was no evidence of specific disease, waxy liver, or cirrhosis. There was probably renal disease, although no casts had yet been found in the urine. The visiting physician expressed the opinion that the renal disease did not account for the predominant amount of hydro-peritoneum. There was a small amount of hydro-thorax. The operation of tapping had already been performed fourteen times within about eight weeks. An effort was being made to remove the fluid by means of acetate of potash and infusion of digitalis; but it was believed that it would soon become necessary to repeat the operation. The doctors were unable to determine the cause of the hydro-peritoneum.

NEURALGIA AND QUININE.

Three cases of neuralgia affecting the sciatic and anterior crural nerves were seen. The three cases were being treated with large doses of quinine. The question of malaria was not mentioned. Each man received twenty grains a day. One had almost entirely recovered. No cinchonism had been produced in either case. The other cases had not been benefited by the treatment, and were to receive thirty grains a day, and so on, until cinchonism was produced, if the disease did not yield before that point was reached. Thirty grains a day cured the other cases.

CABINET OF MORBID PHENOMENA.

This man had cardiac disease; venous pulsation in the jugular was associated with it; probable renal disease; and enlarged spleen. The new feature in his case was the occurrence of jaundice. The jaundice was regarded as being produced and protracted by chronic gastro-duodenitis. His visiting physician had ordered the application of a blister over the epigastrium, and its action had been attended with good results. The additional remark was made that the application of a blister over the epigastrium in this class of cases (jaundice dependent upon chronic gastro-duodenitis) was a favorite, and the most beneficial item in the treatment. Another point with regard to the treatment which was insisted upon was, to particularly avoid all active measures, such as mercurials, purgatives, emetics, etc. The kidneys, however, may be stimulated to assist in carrying off the accumulation of bile. The passage of only a limited amount of bile may persist for a long time, and in this way a chronic gastro-duodenitis may prolong a jaundice perhaps for two years.

KNEE-JOINT.

The case was interesting chiefly with reference to one point. One knee-joint was red, swollen, and painful, and the question was, is the affection synovitis or articular rheumatism. The patient was aged eighteen. Family history negative. Never had had rheumatism or intermittent. After exposure to cold and wet, he felt pain in head and back; urine became scanty and high-colored, and the bowels were constipated. When admitted to the hospital, Jan. 18, his pulse was 120 and temperature 102°; Jan. 19, T. 102½°; Jan. 21, T. 101½°; Jan. 22, T. 100½°. The febrile movement was regarded as specially significant of rheumatism. Rheumatism affecting a single joint is rare, but such cases do occur, says the visiting physician, and cardiac complication may occur with rheumatism affecting a single joint, as well as when several joints are affected. Correct diagnosis is important, as having a bearing upon the treatment; for the treatment is to have reference to forestalling the cardiac complication. Indeed, in another ward a case of monarthritic rheumatism was seen, in which evidence of endocardial complication had been developed since her admission into the hospital.

Progress of Medical Science.

POISONING BY COLCHICUM IN BEER.—It is well known that within the last ten years the production of various kinds of beer has increased five hundred per cent., while the supply of hops has increased but slightly. It has been surmised that some substitute for the bitter principle of hops is in use among the beer manufacturers. It is notable that the demand for colchicum autumnale has increased very much within the last few years, and it has been supposed by many that the alkaloid colchicine may be the substitute employed.

Dr. Boettern, of Faaberg, in Denmark, writing to the *Hospitals Tidende*, tells the following incident, which proves that this substance is actually used:

He and three companions dined at the house of a friend, and during dinner drank some English ale. About a quarter of an hour afterwards they began to have symptoms of poisoning. In all the cases there was cardiac depression and frontal headache. Three of them had vomiting, and the Dr., in addition, had a profuse watery diarrhœa. A domestic who had also taken some of the ale was similarly affected. There was cardiac oppression until vomiting took place, when there was a feeling of relief; but the oppression soon returned only to be relieved by the vomiting. The following day they all complained of burning heat in the head, thirst, and a sensation of chilliness, and one of them had severe rheumatic pains in the back and limbs. The next day the Dr. had a severe outbreak of lichen over the whole body, but it gradually disappeared after five days' use of warm baths and mineral acids. All the cases finally recovered.

The ale had been imported in a barrel from England, and that drank on the day in question happened to be some of the last in the barrel. Chemical analysis showed the presence of colchicine in considerable quantity.—*Hospitals Tidende*, Nov. 11, 1873.

MICROSCOPIC EXAMINATION OF ATMOSPHERIC DUST.—In order to acquire a knowledge of the bodies diffused through the air, Douglas Cunningham instituted a series of examinations of the atmosphere in the business quarter of Calcutta. The instrument used for this purpose was the aëroscope of Panchet. The results of the examinations may be summed up as follows:

1. Bacteria were never found in the dust of dry air, but were common in the particles deposited from moist air.

2. By mixing the dust of dry air, exposed to tropical heat, with putrefying fluids, fungi and bacteria were

rapidly developed, although previously not a trace of them was to be discovered.

3. Spores and other vegetable cells are constantly present in atmospheric dust, and usually in large numbers. The majority of them are living, as well as capable of growth and further development.

4. There exists no connection between the number of organisms in the atmosphere, or any specific character of the organisms, and the prevalence of an epidemic.

5. The amount of inorganic and amorphous particles suspended in the air is dependent on the degree of moisture of the atmosphere and the violence of the wind, while these circumstances have no influence whatever on the number of organized atoms.—*The Lond. Med. Rec.—Allg. Med. Cent. Ztg.*, xliii. 34.

Tar Cancer.—At a recent session of the German Surgical Society in Berlin, a paper was read by R. Volkman on "*Tar and Soot Cancer.*" The writer had observed some peculiar affections of the skin in persons engaged in paraffine works. These affections were apparently caused by irritation from some of the tarry products of the coal, and occasionally culminated in a disease that resembled in every particular the chimney-sweep's cancer described by the English. The first stages of the affection manifested themselves in a violent itching which among the workmen goes by the name of "tar-itch." Following this the epidermal layer becomes thickened, and the functions of the sweat-glands and sebaceous follicles are stimulated. The epidermis is shining and the cutis becomes leathery and wrinkled, showing little elevations, in a short time, the size of pin-heads, sometimes smooth and sometimes horny as in *ichthyosis hystrix*. Psoriatic patches are very common, together with "acneiform papules and hard, occasionally confluent tubercles." These appearances occur in various situations of the body, and in the milder cases are liable to be mistaken for syphilodermata, or in the severer ones for *erythema nodosum*. At this stage of the disease, if the occupation be abandoned, the affection is curable. If suffered to take its course, however, the hyperplasia progresses with inflammatory action and ulceration, and the tar-cancer is developed. The back part of the scrotum and perinæum are attacked by preference, and extensive destruction of tissue may occur in this situation. In comparison with other forms of cancer, the course of this disease is decidedly benign. The treatment consisted in maintaining perfect cleanliness, and in cultivating a new integument by transplantation or grafting.—*Berl. Klin. Woch.*, 18, 1874.

Statistics of Croupous Pneumonia.—During the years 1857–73 inclusive, 10,303 patients were treated at the Polyclinic in Heidelberg. Of these, 261 were cases of croupous pneumonia which Dr. Jurasz has tabulated in various ways with the view of determining certain interesting facts with regard to the disease. 102 of the cases occurred in children under 10 years of age, and the largest number (16 per cent.) in the third year. After the 1st decennium, the frequency of the disease appears to diminish until the period of middle age is passed. The number of cases in the second, third, fourth and fifth decennium were comparatively small. The least number of cases occurred from 20 to 30; the largest number (46 per cent.) from 70 to 80. These statistics, therefore, do not sustain the commonly accepted rule that pneumonia is essentially a disease of strong manhood.

One hundred and twenty-one of the 261 cases were in males, 140 in females. The implication of this, however, as to the influence of sex, must be modified by referring to the statistics regarding the whole number of patients, which show a large excess in the number of females over that of the males. Taking this into account it was found that 27 per cent. of the cases were males, and 2.4 per cent. females. Calculating in a similar manner with regard to the 102 cases that occurred in children under 10 years of age, the result shows that 3 per cent. were boys and 27 per cent. girls.

In reference to the situation of the disease in the lungs the statistics indicate that the right lung was oftener attacked as a whole than the left, but that where single lobes were affected the left lower lobe was more frequently attacked than the right lower. Next in frequency after these came the right upper lobe, then the left upper, and finally both lungs together. In pneumonia duplex the inflammation always began in the two lower lobes simultaneously.

A chill ushered in the disease in every instance excepting in small children. Under 3 years of age, the chill was never observed. The duration of the disease was accurately determined in only 146 cases. Of these 60 ran their course in just seven days, and 115 of them in from five to nine days. Phthisis, induration, abscess and caseous pneumonia, which are often mentioned in the text-books as sequelæ of croupous pneumonia, were not observed in a single instance.

But 30 of the 261 cases terminated fatally, or 11.5 per cent. The ratio of mortality was least between the ages of 10 and 30, and next, under 10. After 50 the mortality increased rapidly with the age. Judging from the statistics the writer concludes that the mortality of the disease depends upon the patient's power of resistance, the complications and the extent of the inflammation. The location of the inflammatory process appeared to have no influence in this connection.—*Berl. Klin. Woch.*, 18, 1874.

New Views on Ammonæmia.—The term febris urinosa, or *fièvre urineuse* of the French, has been used to describe a peculiar complex of symptoms in certain urinary affections that are exceedingly fatal. These symptoms consist of more or less violent fever, with irregular chills, marked gastric disturbance, as shown by a dry tongue, frequent vomiting, disinclination to food and slight diarrhœa; at the same time there is mental disturbance, the patients at first are apathetic, gradually become somnolent, answering briefly to inquiries, later become mildly delirious, and finally die in a comatose condition. In other cases the symptoms are only febrile and gastric. General convulsions or irritation of the motor-nerve system are exceedingly rare. As to the amount of urine passed, it is somewhat less than normal, though not much. It is, however, passed more frequently than usual, generally with some distress, is always alkaline from the presence of the carbonate of ammonia, and contains pus and blood in varying quantity. There is often incontinence, and the urine which escapes in this way gives off a strong ammoniacal odor that can be perceived at some distance. Ammonia cannot be detected in the breath with any certainty. The fact is, that ammonia plays such an important part in the disease that the name ammonæmia was selected for it by Jaksch and Treitz, who supposed that it expressed the materies morbi. Rosenstein, of Leyden, dissents from this opinion most decidedly. Experiments on animals that have been injected with carbonate of ammonia show that intense motor as well as cerebral disturbances are peculiar to ammonia poisoning.

To reach the cause of the trouble, Rosenstein says that we must go a step further back and inquire into what produces the ammonia found in the urine. It is doubtless true that it arises from the decomposition

of urea with the addition of water, and it has been supposed that mucus, acting as a ferment, causes the decomposition. This, however, is an error in the majority of cases. Even when blood and pus originate in the bladder the urine is always acid, unless it be retained a long time, as by a stricture, or by hypertrophy of the prostate. Mucus acting upon the urine, even outside the bladder, is slow in making it alkaline. It is important to recognize these points, for it will explode the old notion that pus in the bladder produces an alkaline urine, and pus in the kidney an acid one. Traube was the first to show that alkalinity often follows the introduction of the catheter, and that the urine which was previously free from bacteria, is now loaded with them. In nearly every case of alkaline urine, bacteria can be found; in the remainder it may be due to the injection of certain substances that produce an alkaline urine, or possibly to mucus.

Rosenstein thinks it probable that the symptoms so often ascribed to ammonæmia, are not due to it, for the reasons above named, but are probably due to putrid infection from the absorbtion of lacteria into the blood. If this theory be true, then the treatment by benzoic acid, as recommended by Frerichs, Robin, and others, is not applicable, and it would be better to prevent the decomposition of the urea by employing anti-fermentatives, such as carbolic acid and quinine.—*Deutsche Zeitschr. f. pract. Med.*, 20, 1874.

THE STRUCTURE OF THE THYROID GLAND.—The views of Bočchat have lately been published, and contain some points which are new. He differs from previous investigators in asserting that the alveoli of the gland freely communicate with one another, are not round cavities, but have an irregular form. The vesicular walls consist of a simple layer of epithelium which separates them from the numerous lymphatics. The epithelium cells are broader than they are long, and are consequently not columnar, as Verson has stated. During early life the vesicles contain a tenacious fluid in which is a variable number of nuclei. In later life, they are filled with colloid material. The lymphatic vessels form large cavernous networks, which are distributed throughout the connective-tissue stroma of the gland.—*Allg. Med. Central-Ztg.*, 43, 1874.

PARASITIC GROWTHS IN THE RUBBER NIPPLES OF NURSING-BOTTLES.—Mettenheimer of Schwerin, who has devoted a good deal of attention to the development of parasitic fungi on the rubber attachments of nursing-bottles and breast-pumps, has lately had further experience in this direction. He has satisfied himself that the action of warmth and moisture, combined with the act of sucking, produce changes in the structure of the rubber which may be a source of disease. He had found by previous examination that the fungi were apt to form on the surface of the rubber, if the strictest attention were not paid to cleansing it. He now finds that the interior may become the seat of various sorts of foreign material even where the surface is kept clean. This is partly parasitic and partly not. The rubber so affected swells up, loses its glossy bright appearance, becomes rough, and has a yellowish color which is due to the fungous growths that are firmly fixed in the tissue. It now tears easily and has lost its elasticity. Within, it contains cavities, which are filled by fat drops, branching fungous filaments and spores scattered about or grouped in spaces or clefts. This condition is most apt to occur when the infant has teeth, and especially if the rubber be torn.

It is inferred that the same change may take place in drainage-tubes, pessaries, etc., if they are allowed to remain for a length of time in situ. For this reason it is probable that the red rubber which is recommended for these purposes possesses some important advantages. The entire substance of the tissue is impregnated with powdered hæmatite, the peroxide of iron, which fills up the interstices between the fibres, and prevents the ingress of foreign matters.—*Memorabilien*, 3, 1874.

DRAINAGE-TUBES AND INTRA-PERITONEAL INJECTIONS IN OVARIOTOMY.—The successful results which Spencer Wells, Peaslee, and Sims have gained by the introduction of the drainage-tube, have induced Nussbaum, of Munich, to resort to it in his recent cases. He agrees with Sims that it should be employed in every case, for he believes that the shock of the operation will not be much increased by this additional step, while it serves as a safeguard against one of its greatest dangers. If, however, it be found necessary to do it subsequently, the shock to the patient will be materially increased. He relates a case in which he tried this new method with success. He feels assured that without it the termination would have been fatal. After removing the tumor, which was of large size, and had a short pedicle, he succeeded in allaying the hemorrhage, by several applications of the actual cautery, but he was unable to prevent the oozing from the deeper portions of the abdominal cavity. Fearing that the blood and serum would collect, and might give rise to septicæmia, he determined to establish an opening through Douglass's cul-de-sac. This he did without much difficulty, as the tissues were found to be thin at that point. He then introduced a drainage-tube through the incision, and brought it out through the abdominal opening, and fastened both ends together. The edges of the abdominal wound were then brought together, leaving a space for the drainage-tube. Through this he injected weak solutions of carbolic acid until the fluid which escaped by the vagina was quite clear. During the subsequent three hours, however, a very large amount of bloody serum passed out through the tube. Had this fluid remained it would, doubtless, have been absorbed by the system and the patient would probably have died in a few days of septicæmia. Nussbaum states that in seventy-eight cases in which he has done this operation, he has lost twenty-eight from septicæmia, and he feels confident that the majority of these would have been saved by the drainage-tube. In five recent cases he has adopted the new method, and though he does not feel warranted in basing conclusions on such insufficient statistics as they will furnish, still he feels that the use of the tube, combined with frequent injections through it, have been of the greatest value. He even goes so far as to say that a continuous stream of some mild antiseptic fluid may prove a necessity in certain cases, and he has no fear for the influence of air or water upon the bowels or peritoneum. He adds that the aim of all these operations should be to secure the cleanest cuts with as little wounding of the tissues as possible, and to arrange the parts in such a way that an avenue of escape may be offered at the most dependent portions of the wounds for any secretions that collect.—*Aerztliche Intell. Blatt, Memorabilien*, 3, 1874.

PLACENTAL SYPHILIS.—The chief difficulty which has lain in the way of deciding whether certain placental diseases were syphilitic or not, is due to the fact that the embryo had been macerated by the fluids so that it was impossible to distinguish any reliable sign of the disease. Since Wegner, in his work on bone-syphilis, has shown that osteo-chondritis of the fœtus is a constant phenomenon in hereditary infection, we have been furnished with a diagnostic mark in these

cases. Frankel, of Breslau, has undertaken to trace the disease a step farther back, viz., to the placenta; and having a large number of specimens at his disposal, he has examined them with the view of discovering the pathological changes produced by the disease. He has found that affections of the villi are characteristic, and must be regarded as the most frequent form of placental syphilis. This change he believes to be a peculiar growth of granulation cells in the placental villi, such as have been described by Ercolani. The gross changes in the placenta are increase in volume, weight, and consistence; the villi are plump and thick, which is due to the existence of numerous granulation cells, of medium size, that appear to come from the vessels, and proliferation of the epithelial covering of the villi.

If this change has extended throughout the whole placenta, the fœtus will die in utero; if, however, it is circumscribed, life may be preserved. There may also be hyperæmia, extravasations of blood, more or less formation of connective tissue, but they are not characteristic of syphilis. In one case, where the mother was known to be syphilitic before conception, the maternal placenta was the seat of gummy growths. In another, where infection occurred in the later stages of pregnancy, the fœtus and placenta appeared to be unaffected.—*Habilitationsschrift—Berl. Klin. Woch.*, 21, 1874.

FREQUENT CAUSE OF MISCARRIAGE.—Dr. J. F. Bird, of Philadelphia, writes: "It not unfrequently happens that miscarriage occurs in the same individual about the fourth months consecutively for several pregnancies. The cause is often to be found in the fact that as soon as pregnancy occurs the uterus settles down and retroverts. In this abnormal position miscarriage must necessarily occur as soon as the farther development of the fœtus becomes impossible. The uterus cannot rise into the cavity of the abdomen, and cannot become enlarged much beyond the fourth month, because of its position within the pelvic cavity. It must therefore disgorge itself. The appropriate remedy is the use of a proper pessary in the early months of utero-gestation. This should be removed as soon as the uterus is so far developed as to render it impossible either to prolapse or retrovert.

A Mrs. R. became a patient of mine in her sixth or seventh miscarriage. I had not seen her in any of her former miscarriages. She was exceedingly anxious to have a living child. In her next succeeding pregnancy I introduced a double lever hard-rubber pessary, and directed her to wear it until after the fourth month. She removed to Boston, soon after. At the request of her husband I went to Boston, and removed the instrument on the 12th of June, 1872. Whilst there I introduced the parties to Dr. Wheeler, of Chelsea, who took charge of the case. On the 1st day of December following, she was delivered of a fine healthy male child, and a few months ago presented the boy to me in my office. This case illustrates my position, and could be supported by a number of others of the same character.

TAMPONS OF COAL-TAR IN VAGINITIS.—Dr. Siredey derives great success in treating vaginitis with tampons of tow well soaked in "coal-tar saponine." This appears to be an excellent modifier of inflamed surfaces; being, moreover, an excellent disinfectant. It is best to remove the tampon after twenty-four hours; to use injections the second day, and to renew the application on the third day.—*Jour. de Méd. et de Chirurg Pratique.*

ARTICLES IN OUR EXCHANGES.

SURGERY.

Caries of the acetabulum—coxitis with abscess. PETRAEUS. *Hospitals Tidende*, 14, 1874.

Double luxation of the jaw. VELASCO. *L'Indipendente*, Feb., 1874.

Traumatic luxation of the femur—reduction. MARCACCI. *Lo Sperimentale*, April, 1874.

Goitre treated by cutaneous incisions, and cauterization with nitrate of silver. LARGHI. *Ann. Univ. d. Med.*, March, 1874.

Aneurisms and injuries of arteries observed in the clinic during a period of three years. ALBANESE. *Gazz. Clin. d. Palermo*, Jan., 1874.

A new and convenient method of cauterizing. DEL GREIO. *L'Imparziale*, May, 1874.

Forced flexion of the joints in the treatment of aneurism, with a list of cases cured. D'AMBROGIO. *Il Movimento*, April, 1874.

False articulations following fractures, and their treatment. RIZZOLI. *Bull. d. Sci. Med.*, March, 1874.

Extraordinary incubation in a case of rabid hydrophobia. ALBANO. *Gazz. d. Med. Pub.*, March, 1874.

Retro-peritoneal hernia, with observations on the anatomy of the peritoneum. WALDEYER. *Virchow's Archiv*, April, 1874.

Œsophagotomy. BOSCH. *Med. Corr.-blatt*, 11, 1874.

Report of cases of lithotripsy in practice. IVÁNCHICH. *Allgemein Wien. Med. Ztg.*, 15, 1874.

ANATOMY AND PHYSIOLOGY.

Points in the histology of the human kidney. BRANWELL. *Monthly Microscop. Journal*, April, 1874.

Contribution to the anatomy of the sympathetic ganglia of the bladder. FRANCIS DARWIN. *Quart. Journ. of Microscop. Sciences*, April, 1874.

On the structure of tendinous tissues. STEPHANINI. *Giorn. d. R. Accad. d. Med.*, Feb., 1874.

Experimental investigations on the functions of the brain. NOTHNAGEL. *Virchow's Archiv*, April, 1874.

Experiments with regard to coughing. KOHTS. *Ibid.*, May, 1874.

Embryological and histogenetical investigations on the sympathetic and central cerebro-spinal nervous system. LUBIMOFF. *Ibid.*

Fissure of the cæcum, bladder, and genitals, spina bifida, absence of the abdominal muscles, and umbilicus. BEHRENDT. *Ibid.*

Transfusion of water in the capillaries under blood pressure (continued). KÖRNER. *Allgemein. Wien. Med. Ztg.*, 13, 1874.

MISCELLANEOUS.

Report of diseases treated during 1873 by compressed air. RASMUSSEN & BRUENNICHE. *Ugeskrift for Laeger*, 16, 1874.

Staining of microscopic sections with magenta. W. H. JACKSON. *Quart. Journ. of Microscop. Science*, April, 1874.

Compression by gum-elastic and by air. ZOTTI. *Il Raccoglit. Med.*, March, 1874.

Microscopy of the urine. BERGONZINI. *Lo Spallanzani*, April, 1874.

Collection of cases in medical jurisprudence. LOMBROSO. *Annali Univ. d. Med.*, March, 1874.

Action of light on living bodies. MICI. *Gazz. Med. Ital. d. Prov. Ven.*, April, 1874.

Condition of public hygiene in England and America. SANDER. *Deutsche Vierteljahrsschr. f. Oeffentl. Gesundheitspfl.*, 1, 1874.

The cholera in Dantzig in 1873. LIÉVIN. *Ibid.*

The influence of elevation on the development of phthisis. CORRAL. *Ibid.*

Endoscopic examination of the urethra and bladder. GRÜNFELD. *Allgemein. Wien. Med. Ztg.*, 13, 1874.

Sixteen thousand cases of diseases of the nerves, chest, and larynx. FIEBER. *Ibid.*, 15, 16, 17, 18, 1874.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, July 15, 1874.

ARMY STAFF RANK.

THE question of army staff rank, in which the profession has been so much interested for many months past, has at last been settled. It is well, after the struggle is over, after the passage of the army bill by Congress, to see what has really been accomplished. In order to do this intelligently we shall quote that part of the bill referring to the provisions for the medical department. Section 7 of said bill provides:

"That the Medical Department of the Army shall hereafter consist of one surgeon-general, with the rank, pay, and emoluments of a brigadier-general; one assistant surgeon-general, and one chief medical purveyor, each with the rank, pay, and emoluments of a colonel; and two assistant medical purveyors, with the rank, pay, and emoluments of lieutenant-colonels, who shall give the same bonds which are or may be required of assistant paymasters-general of like grade, and shall, when not acting as purveyors, be assignable to duty as surgeons by the President; fifty surgeons, with the rank, pay, and emoluments of majors; one hundred and fifty assistant surgeons, with the rank, pay, and emoluments of lieutenants of cavalry for the first five years' service, and with the rank, pay, and emoluments of captains of cavalry after five years' service; and four medical store-keepers, with the same compensation as is now provided by law; and all the original vacancies in the grade of assistant surgeon shall be filled by selection by competitive examination, and the Secretary of War is hereby authorized to appoint from the enlisted men of the army, or cause to be enlisted, as many hospital stewards as the service may require, to be permanently attached to the Medical Department, under such regulations as the Secretary of War may prescribe. And the number of contract surgeons shall be limited to seventy-five on or before the 1st day of January, in the year 1875; and thereafter no more than that number shall be employed."

To those who have not given particular attention to the subject, it might appear that justice was done to the medical corps; that, in fact, the profession had received all that it asked for. The contrary is so far the case, that instead of gaining anything in the way of rank—instead of elevating the status of the medical officer—instead of giving encouragement for the right men to stay in the service, offering inducements for the competent young medical man to enter the service, our legislators have taken a step or two backward.

By the provisions of the act in question, two lieutenant-colonels and ten surgeons are cut off. This certainly does not look like an intention on the part of our members of Congress to concede to the wishes of the profession of the United States. If we are mistaken in our interpretation of the spirit of such as legislated this measure, we should like to have our error pointed out to us.

In regard to the matter of promotion, the following clause of the same bill will throw some light, and may prove significantly suggestive, to the coming medical man:—

"SEC. 7. That as vacancies shall occur in any of the grades of the Ordnance and Medical Departments, no appointments shall be made to fill the same until the numbers in such grade shall be reduced to the numbers which are fixed for permanent appointments by the provisions of this act; and thereafter the number of permanent officers in said grades shall continue to conform to said reduced numbers; and all other grades in said Ordnance and Medical Departments than those authorized by the provisions of this act shall cease to exist as soon as the same shall become vacant by death, resignation, or otherwise, and no appointment or promotion shall hereafter be made to fill any vacancy which may occur therein."

It will be perceived by those who know what the department was, and what it is now made to be, that all chances for promotion, for at least two or three years, are entirely gone—a pleasing and encouraging circumstance for the army surgeon, and a high compliment to the earnest entreaties of the profession in his behalf!

In spite of all this, we have no doubt that the various Congressmen returning to their homes will have the patronizing effrontery to say to their medical constituents that the army staff rank has been settled in a very satisfactory manner. We wish to say, in the name of the profession, that the question is still very far from being settled. The sooner we can open our eyes to the fact, the better prepared can each and every one of us be to make our respective representatives know that we do not endorse this measure; that we are, in fact, astonished at its provisions, and thoroughly disgusted at the fact of its final passage.

The fight, however, for the principle which we have advocated is not yet over. If we are defeated, we must not be discouraged. Far from letting the matter rest where it is, we must make renewed efforts to obtain what was originally asked. We are confident that we can yet accomplish our ends if we make use of the proper means.

Our object, more particularly at present, has been to inform our readers what has actually been done, that they may be early informed what has yet to be accomplished before justice is done to the army medical officer, and before the medical profession of the country can say that it is satisfied. But we shall take other opportunities to discuss the general merits of the bill.

Reviews and Notices of Books.

REGULATIONS OF THE UNITED STATES MARINE HOSPITAL SERVICE FOR THE COLLECTION OF HOSPITAL DUES AND THE APPLICATION OF THE FUND RESULTING THEREFROM. Washington, 1873.

ANNUAL REPORT OF THE SUPERVISING SURGEON OF THE MARINE AND HOSPITAL SERVICE OF THE UNITED STATES FOR THE FISCAL YEAR 1873. Washington, 1873.

THE Marine Hospital Service of the United States, which was organized in 1798, has received a new impetus, and has acquired an important position, more particularly as a medical institution, from the intelligent legislation in its behalf in June, 1870. The action then taken placed the Service more nearly on a par with the medical department of the army and navy, and calls for the recognition and respect of all medical men. We are indebted to the Supervising Surgeon of the Bureau of the Hospital Service for the able documents, prepared under his supervision, as evidence of the important work which the Service has accomplished for the benefit of our sick and disabled seamen.

The Marine Hospital Service of the United States was inaugurated in 1798. As a working department of the government it had a varied experience of good and bad for the first seventy years of its existence. Many evils and abuses crept into the organization which it was impossible to correct. It was knocked about from one bureau of the Treasury Department to another, and always wanted unity of purpose and judicious supervision to make it a perfect working agency. Sensible of the needs of the Service, the Secretary of the Treasury, Mr. Boutwell, pending the preparation and passage of the Act of June, 1870, availed himself of the advice of Surgeon J. S. Billings, U.S.A., who gave valuable aid to the Service in the limited time he was able to spare from his duties in the office of the Surgeon-General of the Army. Our merchant marine is, however, most largely indebted to Dr. J. M. Woodworth, the present able Supervising Surgeon, for the fidelity and zeal he has exhibited in working up the department to its satisfactory condition at this time.

The present code provides, in specific terms, for the assessment and collection of hospital dues, and for the proper distribution of the fund so created. It prescribes the proper care to be given sick and disabled seamen, in order to insure their speedy return to their duties. It aims to provide able and competent surgeons and assistant surgeons, by examinations similar to those required in the army and navy, who will furnish the most satisfactory relief to their patients, and command the respect of the profession. It will also meet the approval of medical men to know the purpose of the present head of the department to contribute to medical literature and instruction by the publication of well-written articles on the diseases incident to seamen, and to open the hospitals more fully for the instruction of medical students.

During the year ended June 30, 1873, 13,529 seamen were furnished medical and surgical relief, at a cost of $422,502 98, or at a net cost to the government of $86,657 03. The table of results obtained by the treatment of the seamen will compare favorably with that of any civil hospital, and the expense for the administration of the service is equally satisfactory. The receipts from hospital dues, which in former years fell far short of meeting the expenditures, under the present organization show a marked improvement, and in a short time will, without doubt, render the Service self-sustaining.

The Marine Hospital Service is the first organization in the country to adopt the provisional nomenclature of the Royal College of Physicians of London. By the adoption of this system the hospital records, hitherto almost valueless for comparative study and consequent profit, will be available in the future in determining many questions as to the effects of seafaring pursuits on health and life, and furnish the sanitarist the basis for important action concerning the seaworthiness of sailors.

The latest report of the Supervising Surgeon contains an interesting article by himself on "Hospitals and Hospital Construction." It is entirely in consonance with the most approved views of the day, in reference to construction, ventilation, air-space, heating, and the like; indeed no better epitome of the subject could be written. Very instructive articles follow, by Dr. Toner, on Yellow Fever, to whose paper is appended an interesting account of the Yellow-Fever Epidemic of 1873, by Dr. Woodworth and the medical officers of the Service at the various ports where the disease appeared; by Dr. Minor, on a case of Double Diaphragmatic Rupture and Hernia, annotated by the Supervising Surgeon; by Dr. Ellinwood, on Urethral Strictures; by Dr. Heber Smith, on The Sailor and the Service at the Port of New York; and by others, on similar subjects of interest and importance.

We cannot fail to notice an evidence of life and energy in the present administration of the service, as shown by the documents before us, which must result in much good to the seaman; and as the merchant-marine of our country must ever be an important element in our national prosperity, we give our hearty encouragement to every endeavor to make its organization more sound and efficient.

Comparing the average figures for the two years during which the present Supervising Surgeon has been in charge of the Bureau, with the corresponding figures for the year ended June 30, 1871—and under the operation of the same act, but before the appointment of a supervising surgeon—it will be found that the economical result of his administration has been—

To *increase* the number of customs districts in which hospital relief is furnished, nearly 27 per cent.

To *reduce* the average daily *per capita* cost of such relief about 20 per cent.

To *increase* the collection of hospital dues about 16 per cent.

To *reduce* the total cost of the service 9.4 per cent.

To *reduce* the net cost to the Government over 51 per cent.; and, as a consequence,

To diminish the amount of the deficiency appropriation for the current year to only 40 *per cent. of that of* 1871.

AN ESSAY UPON SYPHILITIC STRICTURES OF THE RECTUM. (ESSAI SUR LES RETRECESSEMENTS SYPHILITIQUES DU RECTUM.) By Dr. EUGENE GODEBERT. Paris, 1873

THIS subject, although largely written upon, is perhaps to-day one of the least clearly settled in syphilography, consequently any opinions regarding it, though they may not be conclusive, are interesting as expressing the views of one who has given attention to it. The present author has taken it as the subject of his inaugural thesis to the Faculty of Medicine of Paris, and he reproduces, in the main, the views of the well-known Parisian surgeon M. Demarquay. As a basis of his work he studies fifty-five cases, which are reported by others, and besides these he adds twelve personal cases, making a total of sixty-seven. Of these he traces a pre-existent syphilis in forty-seven cases. He alludes to Gosselin's theory of the starting-point of the process being specific ulcerations around the anus, which lead to inflammation of the lower parts of the rectum, and consequent contraction, and to the theory of Després, that these strictures result from phagedenic chancres. He divides these strictures into three classes:

1. Those which appear in the secondary period, following mucous patches, and which he thinks may be called secondary strictures.

2. Those of the tertiary period, which are due to deep syphilitic ulceration.

3. Those which appear later on in syphilis, to which M. le Professeur Trélat has given the name quaternary strictures. They consist of a fibrous thickening of the rectal walls, developed under the influence of the syphilitic diathesis. After having detailed several cases, he draws the following conclusions as to the first variety:

1. Secondary strictures result from mucous patches which have involved all the circumference of the anus.

2. They are seated at a variable height, from two to eight centimetres, but they are always more or less accessible to the finger.

3. Their height (up the rectum) does not go beyond usually one or one and a half centimetres.

The tertiary strictures are rare, but still the author thinks that they exist. He reprobates the view of Bärensprung, to the effect that they are due to a scorbutic condition of the blood. The features of these strictures are described as being round, surrounded with a ring of fibrous tissue, having a hard base involving the mucous membrane, and perhaps the muscular coat.

The quaternary stricture is a general neoplastic infiltration of fibrous tissue under the mucous membrane, due to the influence of the syphilitic diathesis. This is the view of M. Demarquay, and is the one entertained by the author. He agrees with M. Guerin as to the fallacy of the view that these strictures are due to scrofula.

Besides the conclusions already given, the author adds the following:

1. The physician should always examine or look for rectal ulcerations, secondary or tertiary, in a syphilitic patient who gives the slightest suspicion of their existence.

2. Besides a local treatment it is necessary to use specific medication.

3. When a stricture is once formed, anti-syphilitic treatment is powerless for its cure.

4. It is necessary, then, to have recourse to surgical measures: slow and progressive dilatation, internal rectotomy with the instrument of M. Lillaux; sometimes even external rectotomy, or linear *écrasement* (a procedure followed and recommended by Verneuil, which, however, seems to be applicable only in cases in which fistulæ exist). Finally, electrolysis, which has been found to be beneficial by Dr. Lefort.

5. Rapid dilatation and the use of caustics should be abandoned.

6. When the rectal touch is performed it is necessary to use the greatest precaution and not to use force.

7. Extirpation of the rectum is not to be practised for cases of stricture.

8. The surgeon need not have recourse to the operation of artificial anus, because in syphilitic strictures of the rectum the retraction is very slow; because the patient applies for treatment before obliteration of the rectum is induced, and finally, because amelioration can always be induced by the means above mentioned.

9. Cancer not being considered, syphilis is the most frequent cause of rectal stricture.

Reports of Societies.

THE NEW YORK SOCIETY OF NEUROLOGY AND ELECTROLOGY.

A STATED meeting of this Society was held at the College of Physicians and Surgeons, on Monday the 18th inst., the President, Dr. Meredith Clymer, in the chair. A large number of members and visitors were present.

An abstract of the minutes of the previous meeting having been read by the Secretary, Dr. A. T. Carroll, and passed,

DR. CLYMER introduced Dr. D. F. LINCOLN, of Boston, who proceeded to the consideration of "The Resistance of the Body to Electrical Force."

Presentation of cases and pathological specimens were then brought before the members, the most interesting of which was one by Dr. Kinnicutt, of a young man, of 19 years of age, suffering from facial paralysis followed by a numbness of the left side of the face. His family history was good, and, until within the last year, had enjoyed good health. At irregular intervals during the past twelve months he had experienced trigeminal neuralgia. Two weeks since he caught cold, combined with sore throat, nasal catarrh, and swelling of cervical glands, which were painful to the touch. He had the sensation of the presence of a plug in the ear. These symptoms continued for three days, with more or less trigeminal neuralgia. On the evening of the third day, in order to relieve the sensations described, the use of an ordinary ear-syringe filled with cold water was resorted to. Instantly on the injection he was seized with great dizziness, accompanied by an inclination to fall on the left side, from which he was saved only by support. This symptom disappeared in from five to ten minutes, but was immediately followed by a feeling of numbness on the left side of the face. He passed a comfortable night; but on looking in the glass the following morning discovered the ordinary symptoms of facial paralysis, with marked paralysis of the facial muscles, inability to close the eye on the affected side, the mouth drawn to opposite side, etc., etc. No deviation of tongue or uvula presented itself, no indication of anæsthesia. There was a slight loss of electro-motive power, contractility of the affected muscles, and marked loss of hearing in the left ear. An examina-

tion of the ear revealed only a depression of the membrana tympani. Subsequent treatment had resulted favorably, though not, as yet, in an entire cure.

Dr. Clymer then introduced Dr. Eugene Dupuy. He remarked that "The physiology of the cerebral hemispheres was still one of the most perplexing and obscure problems in physiology. In spite of much that had been done, there remained much more to be performed; and any experimental researches calculated to throw light upon the functions of the cerebrum were deserving of encouragement. I had occasion to bring before your notice in my inaugural address the recent experiments which have been made with a view to the elucidation of some of these functions by Fritsch and Hitzig, of Berlin, and Dr. Ferrier, of London. Until the practical demonstrations of the German physiologists it was held that the cerebral convolutions were insusceptible to every kind of irritation. They showed by their experiments that when the constant galvanic current was applied to the anterior parts of the brain, that certain muscular movements happened on the opposite sides of the body, and they endeavored to localize in certain definite points in the cerebral convolutions the centres for such muscular movements, regarding the movements thus produced as evidence of the susceptibility of the hemisphere to at least galvanic irritation; and they further observed that this irritation proceeded chiefly, if not entirely, from the anode or positive pole. This was in 1870. Later, in 1873, Dr. Ferrier, of London, following in the path opened up by Fritsch and Hitzig, undertook a series of researches in the same direction, with the view of exactly localizing the supposed motor centres in the cerebral convolutions. His method of investigation consisted in the application of the stimulus of the induced current of electricity directly to the surface of the brain. The conclusions which Dr. Ferrier claimed were the legitimate outcome of his experiments I have recently presented to the Society. The Royal Society of London voted a sum of money to Dr. Ferrier to enable him to continue his experiments. On the 5th of March last, Dr. Burdon-Sanderson, on behalf of Dr. Ferrier, presented to the Royal Society a communication from Dr. F., a further series of experiments, especially on the brains of monkeys, which Dr. Ferrier considered as verifications of points which, in his paper, read six months previously, at the meeting of the British Association at Bradford, he had regarded as only hypothetical These results, which Dr. Ferrier conscientiously believes to be indicated by the turn of his experiments, may be briefly stated as showing an exact localization in the hemispheres of centres or regions for the carrying out of simple and complex muscular movements of definite character, and described by him as of a purposive or expressional value.

These researches towards solving one of the most difficult and obscure problems in cerebral physiology have excited the very greatest interest amongst physiologists, and several eminent physiologists have set themselves towards making experiments, with a view of testing the accuracy of Prof. Ferrier's researches.

At the last meeting of the Society a member well known in the department of electrical investigation showed you some experiments which he regarded as showing the correctness of Dr. Ferrier's conclusions. In December, 1873, Dr. Eugene Dupuy published his thesis, presented to the School of Medicine in Paris, entitled, "Examen de quelques points de la physique du cerveau," containing a number of experiments he had made on the cerebral hemispheres of dogs, cats, rabbits, and guinea-pigs, to test the accuracy of Dr. Ferrier's experiments. These experiments were repeated during the past winter before the Royal Society in London. Before returning to Europe, Dr. Dupuy has kindly consented this evening to favor us with a repetition of these experiments in vivisection, an interesting and valuable contribution to cerebral physiology.

Dr. Eugene Dupuy then proceeded, by the aid of a series of extremely delicate and successful vivisections, to examine the theory of the existence and localization of motorial centres in the cerebral hemispheres. His subjects were two small dogs and two guinea-pigs. His object in exhibiting the guinea-pigs, which had been operated upon some time since, was to demonstrate the fact that the absence of the cerebrum did not deprive the legs of the power of voluntary movement. The theories deduced by Dr. Dupuy were diametrically opposed to those of Fritsch and Hitzig and Professor Ferrier, though the experiments were precisely similar in character.

Dr. Dupuy's conclusions from his experiments may be thus briefly summarized:—

I. That it is possible, by exciting certain points of the cortical layer of the cerebrum, to obtain contractions in every limb.

II. That, as a rule, the fore-limb of the opposite side is that affected.

III. That the electric current must be propagated to the base of the cerebrum to excite either the nerves which arise from it, or the base itself, or the pons varolii.

IV. That if the dura mater be electrically excited, contractions are observed in the foreleg, and generally in that of the opposite side.

V. The fact that the galvanoscopic frog is thrown into a state of contraction when its nerves touched some point of the cerebral mass far from the point excited, confirms the view that the electric current is propagated.

VI. Contrary to the effects obtained by Ferrier, Dr. Dupuy has never been able to obtain any effects upon the tongue, either of projection or retraction.

VII. The whole cortical layer of the cerebrum is probably a centre of reflection for a certain kind of sensibility capable of exerting a reflex action on motor or sensory nerves, but that its presentation is not indispensable for the manifestations of voluntary and even intelligent action.

VIII. In the animals on which Dr. Dupuy has experimented, contractions of the opposite limbs can still be produced, even after the ablation of the optic thalami and corpora striata of the opposite side to that on which the irritation has been applied.

Dr. Austin Flint, Jr., thought that Dr. Dupuy's periments had proved that Dr. Ferrier's conclusions, which had previously been looked upon as definite in their character, were, in fact, indefinite and unreliable. The portions stimulated were not the portions exposed to experiment. Guinea-pigs were especially liable to diffusion, consequently the movements of those animals differed materially from the movements originated by the stimulation of the motor nerve. He thought the points put forth by Dr. Dupuy were well sustained.

Dr. J. W. S. Arnold remarked that there must be diffusion, but how much or in what direction it is impossible to determine. It was quite as easy to discover by the galvanometer as by the galvanoscopic frog.

Dr. Beard observed that the current was diffused at a considerable distance from the electrodes. The current contracted the sciatic nerve when it did not influence the brain or cerebral substance. There was a varied susceptibility in several parts of the body.

Dr. Dupuy's demonstrations had not entirely settled the question. He used very weak currents, and the centres were very complex. He had observed movements on the same side as well as on the opposite side.

Further remarks were made by Drs. J. C. Dalton, J. J. Mason, Dr. Lincoln, and others; and Dr. Austin Flint, Jr., moved that the thanks of the Society be awarded to Dr. Eugene Dupuy for his interesting paper, which resolution was unanimously passed.

THE MEDICAL LIBRARY AND JOURNAL ASSOCIATION OF NEW YORK.

TRANSFUSION OF BLOOD.

THIS association held its stated meeting at its rooms, June 19, DR. J. C. PETERS, President, in the Chair.

After the preliminary business had been transacted,

DR. FREDERICK D. LENTE, of Cold Spring, read a paper on the value of Transfusion of Blood. He stated the main purpose of the paper as a review of the remarks of Dr. B. Fordyce Barker, made at a meeting of the New York Academy of Medicine in January last, and reported in THE MEDICAL RECORD of April 1; and also to refer to the *relative* value of other methods for saving life, when rapidly ebbing from exhaustion produced by hemorrhage, shock, etc. He remarked that though the first experiments in transfusion took place more than two hundred years since, it had never become at all popularized in the profession. From the year 1866 to the present time, seventy successful cases had been reported, amongst a much larger number of unsuccessful ones.

Those in New York City, though performed by the most eminent men in the profession, such as Thomas, Van Buren, Flint, Sr., etc. (six in number), had all proved unsuccessful. The non-success was not due to thrombosis. All who have had a large obstetric experience have noted the enormous quantities of blood lost under those circumstances, and also the extraordinarily rapid convalescence, provided full nutrition was maintained. Deny's cases, referred to by Dr. Barker, were just such cases as could have been relieved by other methods. He cited one case in point, that of a young lady suffering under severe attacks of menorrhagia, and at the time of visit was pulseless at the wrist and completely unconscious. He immediately tamponed the vagina to prevent further loss, ordered enemata of brandy, and Liebig's extract of beef. Being some considerable distance from the city, any reliable means for transfusion could not be easily obtained. Prof. Flint, Jr., was sent for, he having just imported an excellent French instrument. For more than twenty-four hours afterward, it was considered unsafe to change her position across the bed, and her recovery was exceedingly protracted, though she eventually recovered. Dr. Flint, Jr., remarks that, "normally, the patient should have from fourteen to eighteen *pounds* of blood *circulating* in the system to properly *sustain* the functions of the body." Is it reasonable, therefore, to suppose that from two to eight ounces, the amount usually employed in transfusion, should do more than *temporarily* excite the action of the heart? Dr. Edward M. Hodder, of Toronto, injected fourteen and twenty-eight ounces of *milk*, in a few hours, into the veins of two patients moribund from cholera, with immediate relief and subsequent cure. The great difficulty in transfusion of blood is the want of *suitable material*, and on this account alone, if on no other, Dr. Hodder's experiment deserves a further trial.

As regards the use of transfusion of blood in blood-poisoning, further experiments are needed to determine whether the results may not be more permanent, as they have been in one or two cases.

Transfusion has, without question, rescued many lives which would otherwise have been lost, but the treatment will be more successful if it is placed on its proper basis, limited to its appropriate applications, and assisted by auxiliary measures, such as brandy and beef-tea per rectum, elevation of the foot of the bed, warmth to surface, bandaging the extremities, etc. [In support of his views, Dr. Lente cited several interesting cases.]

In gastric cases, the prohibition of all food by the mouth, for days together, except small and regular doses of lime-water and milk; sometimes even prohibiting this, and making the rectum do the duty of the stomach; sometimes the regulated use of *raw* meat, and, more important than all, the use of *induced electricity*, have enabled me to restore the apparently most hopeless cases to life and health. Methodical bandaging (Esmarch's rubber bandage) of the extremities, forcing a large amount of blood from the surface to supply the viscera, digitalis to stimulate the heart, are invaluable both as auxiliaries and substitutes. There is a singular distrust in the minds of the laity and the profession regarding the efficacy of beef-tea, and especially of Liebig's extract and similar preparations. The cases subsequently adduced, however, went far to prove its efficiency, especially in injection, since being more fluid it is more readily absorbed, and its solubility, without sediment, in the smallest quantity of water, renders it possible to give the largest quantity of nutriment in the smallest possible bulk; a matter of no little moment in the case of children or an irritable rectum.

In cases of extreme exhaustion from vomiting during pregnancy Dr. Barker recommends transfusion of blood, but Dr. Lente adopted the ordinary faradic current, passed over the solar plexus behind to the epigastrium in front, or from the *vertebra prominens*, aided by general faradization. In cases of very sudden and imminent danger, when time for transfusion of blood even cannot be had, it might be well to transfuse brandy directly into the veins, or even ammonia slightly diluted.

Gesellius, in a work recently translated by Dr. Janeway, enumerates seventeen cases of tranfusion of animals' blood into men, four of which ended fatally, and even those from causes unconnected with transfusion. He also enumerates 145 successful cases of transfusion of human blood to 52 fatal cases. His details are extremely meagre, and consequently not calculated to inspire confidence as to their reliability. One fact in his tables, however, is of great importance, and will doubtless strike us with surprise. It has been a settled question among us that the practice was a dangerous one, and hardly justifiable. The facts here enumerated prove the contrary. The blood of all the mammalia contains round corpuscles, and what is more important and remarkable, *smaller* corpuscles than the human subject. In THE MEDICAL RECORD of May 15 it is stated that Dr. Hasse, of Nordhausen, has transfused successfully with lambs' blood in 23 cases. He transferred *directly* from the artery of the animal to the vein of the patient. The cases of complete recovery by this means include 5 cases of phthisis, 2 chlorosis, 2 cachexia after severe illness, 1 cachexia after caries of vertebræ, 1 carcinoma ventriculi, and 1 severe hemorrhage after placenta prævia.

Within the past few days J. C. Young, M.D., of the resident medical staff of Bellevue Hospital, and Prof. T. Gaillard Thomas, of the New York State

Woman's Hospital, sent me an account of 2 cases operated on, but never yet reported. In the first, the patient had lost a large amount of blood after amputation, and had sunk so low that transfusion was decided upon. Five ounces of blood were taken from the arm of Dr. Terriberry; it was surrounded by warm water and defibrinated, and by means of a syringe enveloped in warm cloths was injected into the median basilic vein of the patient. Force of the heart and pulse a little increased, and the frequency diminished 10 beats. One hour later 6 additional ounces were injected with about the same result. But shortly after this the patient became delirious, and some few hours after died. The second case was that of a patient who had sustained the removal of a tumor by gastrotomy from the uterus, weighing 50 lbs. The transfusion was performed about 17 hours after the operation, and again at an interval of about 18 hours, but without any effect; and the patient died. Rabbits' blood is dissolved in from 3 to 5 minutes; that of other animals from 20 to 30 minutes. Dogs' and pigeons' blood resist the longest.

Dr. Landois believes that transfusion may benefit the receiver in three ways: 1. By bringing nutritive material into his body; 2. By the oxygen which is derived from the dissolved blood-cells, and in its serum; and 3. By possibly, in certain circumstances, improving the mechanical conditions of the circulation.

A case mentioned by Dr. Barker, and occurring at Bellevue Hospital, is worthy of special notice, some facts regarding it having very recently come to my knowledge. Dr. B. D. Taylor informs me he furnished 16 ounces of blood from his own arm, and another member of staff supplied 3 ounces more—the largest amount of human blood ever used in any one case. This was aided by nutritious and stimulating enemata, digitalis, hypodermic injections of strychnia. She survived about 60 hours, but succumbed at last. The result of this case is very discouraging, and should stimulate a further inquiry into one moot point, whether it is not proper, in all cases, to keep the vessels *filled*. if not with blood, with a proper saline solution added to it, or injected in the intervals of the sanguineous injections *pro re nata*, or with the blood of animals. In 1869 one of the most interesting and successful cases on record occurred, Drs. Buchser and Galeke being the operators. It was reported in THE MEDICAL RECORD for October, 1869. In this case it certainly appears that no remedy short of transfusion of blood would have availed; and, strange to say, only three ounces of blood (not defibrinated) were used. In the very number of THE RECORD (April 1, 1874) containing the report of Dr. Barker's paper is a report by Joseph W. Howe, surgeon to Charity Hospital, of a very successful case, with the recommendation of perhaps the simplest and best method of performing the operation. Here, also, only a small quantity of blood (4 ounces) was injected.

I am aware that these observations have a disconnected and desultory character, partly from the fragmentary way in which the information came to my hands. It was not intended by any means to be exhaustive of the subject, to present any novel facts or theories, or to seek to *establish* any point of practice, but simply to bring the question fairly before the profession, which has never yet been done.

DR. BARKER, in endorsing the remarks of Dr. Lente, said that there had been in all 126 cases of recovery by transfusion of blood. Transfusion, with the improved apparatus now used, presented no dangers, when direct, except from embolism. It does not depend on the quantity so much as the quality of the blood-corpuscles.

DR. DALTON said the real value of transfusion was as a curative agent. In almost every case the operator traced the recovery to the transfusion. It was principally performed on puerperal women, and successfully. The indispensability of transfusion is one of the most important questions of the day. May not the injection of half an ounce of blood save a man's life?

DR. NEFTEL observed that there was no necessity for using defibrinated blood.

DR A. SMITH said that it was seldom that an adequate supply of human blood could be obtained. Lambs' blood could be used entirely. He objected to the use of Liebig's extract of beef, that it contained nitrate of potash.

DR. LENTE, in reply, said that the question of embolism in small vessels required further investigation. He did not recommend undiluted food. Soluble beef, in which there is no sediment, is at once converted into blood and received into the veins.

DR. BEVERLY ROBINSON then read a short paper on the Use of the Nasal Douche; but on account of the lateness of the hour it called forth no remarks, and, after the usual vote of thanks to the writers, the session was brought to a close.

Correspondence.

THE HYDROPHOBIA QUESTION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—I had intended at the meeting of the Neurological Society, on the evening of the 6th inst., to say a few words upon the subject of Hydrophobia; but being suddenly taken ill, I was obliged to leave before Dr. Dalton had concluded his remarks. As the points upon which I desired to touch are of decided importance, I beg leave to consider them briefly in your columns.

1st. As to the pathological appearances in hydrophobia. A deep interest has undoubtedly been aroused in the profession and in the general community by Dr. Hammond's announcements of his observations in the McCormick case. It appears to me, however, that much more importance has been attributed to the lesions described by the doctor than experience will warrant. Notwithstanding Dr. Hammond's statement that the only accurate microscopical examinations previously made in such cases were those reported by Dr. Allbut in 1872, there may be found in the Edinburgh *Monthly Journal of Med. Science* for 1850 a case described by Dr. Sidey, of that city—a most accurate observer—in which, during a searching microscopical inspection of the brain and its membranes, the medulla oblongata, the spinal cord, and the eighth pair of nerves in their origin and course, no abnormal appearances were detected. And Fleming, who, as Dr. Hammond justly remarked, has written the best work on hydrophobia, says that more recently several microscopical examinations of the cerebrum, cerebellum, and medulla oblongata have been made, "*but beyond intense congestion nothing could be noted.*" Now, Dr. Hammond laid particular stress upon the fatty degeneration which he had observed in the roots of the pneumogastric, hypoglossal, and spinal accessory nerves, and assumed that the appearances described by Allbut could have been nothing else than the same morbid phenomena. In Dr. Allbut's own account of his cases, however, he simply stated that there had been noticed throughout all the cerebro-spinal centres,

in different degrees, "little gaps caused by the disappearance of nerve strands, which had passed through the granular disintegration of Clarke."

Moreover, very extensive post-mortem researches have been made in cases of rabid dogs without any satisfactory results. According to Röll, a distinguished German authority, the cadaveric lesions observed in canine rabies offer a certain similarity to those which are the consequence of acute poisoning by narcotic substances. In this connection I may say that I visited McCormick two hours before death, at which time he was, in my humble opinion, decidedly laboring under the narcotism of atropine, two exceedingly large doses of which had been administered to him. In this perhaps erroneous conclusion my friend Dr. Allan McLane Hamilton (no mean authority in such matters), who accompanied me, concurred.

Dr. Bruckmüller, the eminent Professor of the Veterinary Institute of Vienna, published in 1869 an elaborate account of very careful examinations undertaken by him upon 375 mad dogs during a period of 20 years. The principal brain lesions which he observed are as follow: Extravasation of blood into the brain substance, 3 cases; hyperæmia of brain, 26 cases; œdema, usually accompanied by softening of membranes, 74 cases; hydrocephalus, 37 cases. The conclusion Bruckmüller arrived at, after his long and attentive researches, was, that autopsical appearances in the dog prove of no value in defining or distinguishing the disease.

I am afraid that we must accept similarly unsatisfactory conclusions in the human affection, and agree with Trousseau that in the vast majority of instances "the pathological changes found after death are only those dependent on the asphyxia which occurs in the latter stages."

2d. As to the bite of an enraged, but otherwise healthy dog, being capable of producing hydrophobia, Dr. Hammond was inclined to believe in this singular doctrine, and particularly mentioned that the views of Fleming on this point coincided with his own. But I find on page 112 of Fleming's work the following positive statement to the contrary:

"But surely if the bite given in anger by man or animals not rabid had such an influence, cases of hydrophobia and rabies would be quite every-day events. Curs and other dogs are continually biting each other all over the world; and whoever has struggled, as I have, to sleep through the night in a Turkish locality—Scutari, for instance—in Damascus, in Cairo, or in one of the main thoroughfares of a North China town, such as Tientsin, will be ready to testify that sanguinary battles among the half-starved and mangy canine scavengers are matters of at least hourly occurrence. Besides, in this country (England), so far as our observation has extended, dogs kept purposely for fighting—the notorious bull-dogs—are those least frequently affected with rabies. Certain it is that nothing can be more erroneous or terrifying than the assertion that rabies may be induced by the bite of a healthy animal; and it must be strenuously denied that such a result is possible. *No wound, injury, or bite from a healthy dog will produce the specific disease we term rabies.*"

The most conclusive argument against this absurd theory is the well-known fact that in certain portions of the world hydrophobia is entirely unknown, although dogs abound. Such is the case in Labrador, Greenland, Siberia, Australia, Van Diemen's Land, and New Zealand. A correspondent, "Ahuriri," in the London *Lancet*, of March 2, 1872, states that the inhabitants of New Zealand often wonder at their immunity from the affection. They are "greatly afraid that imported dogs will convey the dread disease, which would entail most disastrous results, as the islands teem with dogs tame and wild."

Rabies is unquestionably an affection due solely to a specific virus, and the bite of a non-rabid dog can no more induce genuine hydrophobia than can coition with a healthy but angry female induce syphilis. This latter disease, by the way, in its mode of invasion of the system, and in its indefinite period of incubation, bears a closer analogy to hydrophobia than any other communicable disease—all other diseases dependent upon specific contagion having a very defined period of latency. That of syphilis would appear to be as uncertain as that of hydrophobia. According to Diday, in fifty-two cases of syphilis (not subjected to treatment) the period of incubation ranged from 25 to 105 days; according to Bassereau, the interval between the infecting coitus and the outbreak of syphilitic erythema in 107 cases in which no treatment had been administered, varied from twenty days to five months. Fournier, from an examination of 307 cases, gives an *average* of forty to fifty days. Ricord, as the result of his extensive experience, enunciates the law that when no specific treatment is employed, six months never pass without the period of general symptoms. Sigmund, of Vienna, in 293 reliable cases, gives a maximum of three months. Cazenave goes so far as to estimate the average interval as two years, and relates one instance of ten years; and Vidal approves this statement. Even Bumstead, who endeavors to establish the fact of a definite period of incubation, makes the following statement: "The earliest symptoms of general syphilis (except in cases of hereditary origin and of transmission through the fœtal circulation) have been preceded by a chancre, *probably within three and certainly within six months*, provided mercury has not been given;" he also adds that the development of syphilis is hastened by those causes which tend to depress the vital powers. Such circumstances are well recognized as instrumental in setting free the latent rabific virus.

Paget also alludes to the fact of a diathesis, as in cancer and syphilis, remaining undeveloped for a long period, until excited into action by some local injury.

3d. Now, with regard to the period of incubation of hydrophobia in the human subject, Thamhayn, in *Schmidt's Jahrbücher* for 1859, gives the following periods in 220 authentic instances: In 2 cases, 3 days; in 33 cases, less than 21 days; in 129 cases, less than 7 weeks; in 52 cases, from 7 to 14 weeks; in 21 cases, from 14 weeks to 6 months; thus 202 occurred within 6 months. He also gives one case in which the interval extended beyond 4 years, and another beyond 5¼ years.

I was somewhat surprised the other evening, in listening to a portion of Prof. Dalton's able remarks, to hear that very accurate gentleman state that no good authority believes in such extended periods of incubation as have sometimes been recorded. Dr. Watson, in his Practice of Medicine, commits himself decidedly to the opinion that such long intervals are possible, and adduces several authentic instances. He remarks that the virus deposited at the point of injury would appear to be shut up for an indefinite period in a nodule of lymph, or detained in precarious union with the tissues. He cites also several analogous cases of an incubation of several years of vaccine virus. For my part, I have no doubt that the rabific poison may remain *perdu* for many years, and even until natural death, unless liberated by some injury to the cicatrix or by constitutional causes.

4th. As to treatment, Dr. Hammond relies upon excision. I do not believe it possible for the most skilful surgeon to excise the injured part so thoroughly as not to be in danger of reinoculating the wound which he leaves. Dr. Hammond says that he has excised some 30 or 40 cases, in which no symptoms have yet been developed. The number is too small to prove the efficacy of his treatment. In testimony taken on the subject of hydrophobia before a Committee of the British House of Commons, in 1830, Mr. Youatt, the most celebrated of English veterinarians, stated that he had applied lunar caustic successfully to 400 persons bitten by rabid dogs; and a surgeon of St. George's testified that he had similarly treated 4,000 persons without an accident. The mere *supposition* that Mr. Youatt committed suicide on account of the failure of his preventive treatment in his own person proves nothing whatever. As far as we now know, the speedy and thorough cauterization of the injury with nitrate of silver offers the surest chances of success.

In regard to those precautionary measures which should be instituted in order to protect the community against rabid animals, I agree mainly in the efficacy of those proposed in the resolutions offered by Dr. Hammond, and adopted by the Neurological Society. Although it might be desirable that all dogs should be treated according to Bourrel's method of blunting the teeth, yet I do not believe that any constitutional law could "require" it to be done, and I therefore think that the word "recommend" should have been substituted.

Yours respectfully,
CHAS. P. RUSSEL, M.D.

54 WEST 9TH ST., July 8th, 1874.

ESMARCH'S METHOD.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR:—In all the literature concerning Esmarch's method of preparing a limb for the operation for necrosis, I see no plan proposed for preventing the purulent matter that may be in the diseased parts from being pressed into the blood currents while the elastic bandage is applied.

The following plan for isolating the diseased from the healthy tissues will, I think, prevent the occurrence of this accident.

Take a soft rubber ring, a child's teething ring would serve the purpose in some cases, when the diseased bone lies near the surface. Larger and thicker rings made of rubber tubing or cord will be required to surround larger masses of diseased tissue over deep-seated bone; and apply it flatwise to the limb, in such a manner that it will include the mouths of all vessels contiguous to the diseased mass, as well as the ulcerated soft parts.

Now apply the elastic bandage in the usual manner as far as the ring; arriving there, let each turn of the bandage be so firmly applied over successive portions of the ring held firmly in its place, that the latter will form a circular compress entirely around the abscess. The ring should always be so thick that the turns of the elastic bandage will bridge the space included by the former, and in no case press upon the ulcer. By this method we deplete the vessels of every portion of the limb, except that included within the ring, and we drive no pus into the circulation, which is so often the cause of enlargement of glands, abscesses, and pyæmia.

The loss of blood sustained by this plan of bandaging is trifling, and should not be thought of when we consider the danger to the healthy vessels that may be prevented by making use of the circular elastic compress.

Yours, very respectfully,
J. V. LAUDERDALE,
Asst. Surg., U. S. A.

FORT HAMILTON, N. Y. HARBOR, *June* 5, 1874.

THE NEW BIRTH OF THE AMERICAN MEDICAL ASSOCIATION.

TO THE EDITOR OF THE MEDICAL RECORD.

As one of the few eastern physicians who attended the recent meeting of the American Medical Association, I wish to call the renewed attention of those who did not attend to the fact, already noticed editorially in THE RECORD, that the Association has been reorganized, and substantially on the basis indicated in THE RECORD two years ago, and now promises to be an honor to the profession and the country. The delicate and difficult questions of ethics and of social and political economy are now referred to a judicial council, so that the morning sessions of the Association are given mainly to science; the membership has been somewhat limited, so that it will no longer be an entirely indifferent thing to be nominated as a delegate, and the time may come when authors will place on the title-pages of their books, "Member of the American Medical Association."

The quality of the papers read at the Detroit meeting, and the discussions which they called forth, will well compare with the papers and discussions of the New York State Medical Society. The criticisms of the *Philadelphia Medical Times* on the scientific work of the sections seem to me too severe; they were founded on the very condensed reports, I am inclined to believe, more than on personal observation.

My special object in this note is to suggest to those medical men who have any original or important matters to introduce to the profession, to avail themselves of some one of the sections of the Association. I have used at various times strong language in regard to the Association, and have criticised more severely perhaps than any one the crying errors of its past management; I therefore take all the more pleasure in calling attention to the fact of its reorganization, and in urging the claims of the new Association on the original scientific workers of our profession. My faith is strong that the Association of the future will represent far better than the Association of the past has done, the scientific and scholarly elements in the profession of America. This faith is founded in part on the organic changes that have been made in the Association, and in part on the success of the last meeting at Detroit.

A certain proportion of the noisy, the ignorant, and the unscrupulous will probably appear at the future meetings, as in the past; for these bad elements are always with us, and no large body can be wholly free from them; but they will, I believe, no longer be dominant or dangerous.

The question of presidency, which every year causes so much anxious thought and talk, is now of but trifling moment, except to the successful and unsuccessful candidates and their immediate friends. The Association ought to be strong and great, in spite of the weakness and smallness of any one who may happen to be chosen as its figure-head. The official power is so widely diffused that the success of any meeting must depend more on the officers of the several sec-

tions and on the Committee of Arrangements than on the president.

To these words of compliment and congratulation I may add these criticisms:

1. There should be more system in the management of the scientific and literary affairs of the sections. The officers should arrange, beforehand, for papers, cases, specimens, and so forth, from competent authorities, and great pains should be taken to have a variety of subjects in each section.

The time of every speaker should be limited, as at the State Medical Society, so that all subjects and all speakers may have a fair field.

Stupid papers, offered by proverbially stupid men, should be religiously excluded, or politely referred to a committee.

2. Quiet rooms, of moderate size, should, so far as possible, be selected for the meetings of the sections.

Better that a room be too small than so large that very few can hear the speakers. It is always in bad taste to scream and yell in a scientific discussion. If a man declares that two and two make four, at the top of his voice, we are half inclined to question the truth of his statement. The quality of voice that prevails on the stump is precisely that which the scientific and scholarly instinctively avoid. Every year, even those who have good hearing, lose a serious fraction of the papers and discussions of the Association. In Philadelphia it was found necessary to adjourn the open sessions of the Association from a hall, where nothing could be heard, to a church, where only a little could be heard. In Detroit the arrangements were better, but not perfect. The practical difficulties in the way of correcting this evil are very great, as I am aware; but if the acoustic qualities of the rooms in which the meetings are held are carefully studied the evil can, in some cities at least, be reduced to a trifling minimum.

In the management of the social part of the programme, future committees of arrangements would do well to follow, in some respects, the example of Detroit.

The avoidance of close packing and crowding, by having a number of entertainments at the same time and in easily accessible places; the absence of alcoholic liquors, and the presence of ladies—these features of the last meeting—are surely worthy of imitation.

The cohesive power of oysters and ice-cream is not strong enough alone to hold together the best minds in the profession, but, as an adjuvant to science, is not to be despised.

That all this radical revolution in the constitution and management of the Association has been accomplished so easily, so rapidly, and so peacefully, should be a high encouragement to all medical reformers in the future. The result is a direct triumph of special and persistent effort directed mainly through the medical journals. While there had been for years vague and spasmodic complaining against the Association, THE RECORD was, I believe, the first to speak out on this subject loud enough and long enough to arouse general attention, and the first also to suggest in detail and enforce the necessity of those changes that have since been made.

The medical journals of the country have almost unanimously co-operated in this effort to raise the character of the Association; and while there has been a very wide difference of opinion as to the best methods of correcting the evils, few or none have professed that evils did not exist. Those evils have now become mostly historic, and may well be forgotten. The door is now open for the Association to become the best, as it has long been the largest, medical society in America.

GEO. M. BEARD.

53 WEST 33D STREET.

NOTE ON THE MICROSCOPICAL SLIDES OF DR. OTTO BARTH, ILLUSTRATIVE OF PATHOLOGICAL ANATOMY.

BY ASSISTANT SURGEON J. J. WOODWARD,

U. S. ARMY.

I HAVE SO often been asked by correspondents whether it was possible for them to purchase anywhere really useful microscopical slides illustrative of pathological anatomy, that I presume the following brief note on the preparations of Dr. Otto Barth, No. 34 Waisenhausstrasse, Leipzic, will interest many of your readers.

Dr. Barth advertises a series of 100 preparations on general pathological anatomy, and three special series, of 50 preparations each, on gynæcology, surgery, and tumors.

One of the sets in general pathological anatomy has just been received at the Army Medical Museum. It consists of 100 handsomely made thin sections, some stained with carmine, others with logwood, others injected, and all permanently mounted in Damar or Canada balsam. These preparations represent a selection of the more important diseases of the nervous system, blood-vessels, respiratory, digestive, and sexual organs, the skin, etc., and form an excellent introduction to the practical study of pathological histology. Looking through the series, I found all the slides instructive, and many of them very handsome, comparing favorably with our own preparations at the Museum. I may mention as particularly instructive the preparations labelled catarrhal and croupous pneumonia, intestinal catarrh, dysentery, typhoid ulcer, cirrhosis, amyloid degeneration, tubercle, and cancer of the liver; fatty, amyloid, and granular kidneys; adenoma and scirrhus of the mammary gland, etc.

The preparations are preserved in a handsome mahogany box, with printed labels (in Latin), and are very cheap, the price in Leipzic being 40 thalers. The agent in this country is B. Westermann & Co., No. 471 Broadway, New York, who advertises them for $45 in gold. (This price, however, appears from the catalogue to be based on the original price of the earlier sets, 33⅓ thalers, which has since been increased by Dr. Barth to 40 thalers.)

The only drawback I have observed is the somewhat inconvenient size of the glass slides on which the preparations are mounted. These are 7 centimetres long by 3¼ wide (or 2.750 by 1.375 inches very nearly), instead of three inches by one, which is the usual size of slips employed for microscopic slides in this country.

I have sent to Dr. Barth for the series on gynæcology, surgery, and tumors, and will communicate to this journal a brief note with regard to them so soon as they come to hand.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from June 19, 1874, to July 3. 1874.

COOPER, GEO. S., Surgeon.—Assigned to duty at Benicia Barracks, Cal. S. O. 60, Department of California, June 17, 1874.

FRANTZ, J. H., Surgeon.—Granted leave of absence for four months on surgeon's certificate of disability. S. O. 141, A. G. O., June 29, 1874.

DE WITT, C., Assistant Surgeon.—Assigned to duty at Fort Macon, N. C., S. O. 103, Department of the South, June 29, 1874.

DE HANNE, J. V., Assist. Surgeon.—Granted leave of absence for 4 months. S. O. 138, A. G. O., June 23, 1874.

WEISEL, D., Assistant Surgeon.—Granted leave of absence for 20 days. S. O. 103, c. s., Dep. of the South.

Medical Items and News.

HYDROPHOBIA AND THE MUZZLING OF DOGS.—The following preamble and resolutions were adopted at a recent meeting of the Neurological Society:

"*Whereas*, Observation has demonstrated beyond reasonable doubt that hydrophobia is not more prevalent in summer than in the other seasons of the year; that it is a disease much more apt to affect the carefully tended house-dog than the vagrant animal; that the muzzle impedes many natural actions of the dog, the performance of which is essential to its comfort, if not existence; that the apparatus does not prevent the dog upon which it is applied inflicting wounds with its teeth; that from the excitement and irritation it produces it may become an effective agent in originating hydrophobia; that even without these objections, to be efficacious in preventing the spread of the disease, it should be applied without distinction to all dogs, whether domestic or vagrant, and kept continually on them—a manifestly impossible proceeding; that there is some reason to believe that the human subject may contract hydrophobia from dogs not rabid; therefore

"*Resolved*, That the New York Neurological Society respectfully protests against the recent city ordinance, requiring dogs to be muzzled, as being contrary to science, inefficacious in preventing hydrophobia, and cruel in its requirements.

"*Resolved*, That in the opinion of this Society the most effectual means of preventing the origination and spread of hydrophobia is by the imposition of a tax upon all dogs kept for use or pleasure; requiring the canine teeth or fangs and the incisor teeth to be blunted as proposed and effected by Bourrel, and the destruction, under proper regulations and by duly authorized persons, of all dogs not licensed, or which may be found with the teeth unblunted.

"*Resolved*, That it would be expedient to arrest all dogs found running at large, even if the teeth have been blunted, and to keep them in custody a short time till the owner can be notified, that a fine be imposed upon each owner, and upon the non-payment of which the dog should be destroyed.

"*Resolved*, That all dogs subject to tax in accordance with the second resolution should be duly registered as licensed, and wear a collar upon which the stamp of the licensing officer and the owner's name should be indelibly impressed."

In the absence of any legal enactment the New York Neurological Society recommends to all owners of dogs to have the teeth of the animals blunted in the following manner, as detailed by Fleming in his Treatise on Rabies and Hydrophobia: "The operation is a simple one. For a large dog two assistants are necessary; for a small animal only one. The creature is seated on a table, a gag is fixed in the mouth, between the molar teeth, by a band passed behind the neck; another band or piece of wide tape fastened around the muzzle at the back of the gag prevents any movement of the jaws. To blunt the incisor teeth a file is used, and the longer canine teeth or fangs are shortened by sharp nippers and then smoothly rounded by the file. The gag, of course, must be proportioned in thickness and length to the size of the animal."

ELASTIC LIGATURE IN CÆSAREAN SECTION.—M. Grandesso Silvestri has addressed a note to the Société de Chirurgie, on the use of elastic ligatures for the suture of the uterus after Cæsarean section, the great advantage claimed by him being that the elastic threads follow the shrinking of the uterus and do not allow the edges of the wound to gape. Dr. Silvestri has used this method in one successful case of Cæsarean section.—*Archives de Tocologie.*

DR. A. B. SNELL, late of Shreveport, La., has removed to Amsterdam, N. Y. Dr. Snell has resided for eighteen years in Louisiana, and was surgeon in Gen. Lee's army during the war. He was also chairman of the committee which made the very able report on the yellow-fever epidemic at Shreveport, 1873.

NEW JERSEY ACADEMY OF MEDICINE.—The organization of the New Jersey Academy of Medicine, as authorized by an act of incorporation passed March 10th, 1874, was perfected at a meeting held in Upper Library Hall, Newark, on the 17th of June.

The following are the officers for the current term: *President*, Dr. Theodore R. Varick, Jersey City. *Vice-Presidents*, Dr. J. A. Cross, Newark; Dr. Franklin Gauntt, Burlington; Dr. Thomas F. Cullen, Camden. *Recording Secretary*, Dr. Peter V. Hewlett, Newark. *Assistant Secretary*, Dr. R. Gillman, Jersey City. *Corresponding Secretary*, Dr. McGill, Jersey City. *Statistical Secretary*, Dr. A. W. Woodhull, Newark. *Treasurer*, Dr. H. R. Baldwin, New Brunswick. *Curator*, Dr. P. V. Hewlett, Newark. *Librarian*, Dr. B. A. Watson, Jersey City. *Directors:* Dr. Wm. O'Gorman, Newark; Dr. Edgar Holden, Newark; Dr. R. F. Chabert, Hoboken; Dr. F. G. Payne, Bergen Point; Dr. H. H. Abernethy, Jersey City.

The next stated meeting will be held at Upper Library Hall, Newark, on the third Wednesday in July.

NEW YORK DERMATOLOGICAL SOCIETY.—At the fifty-seventh regular meeting of this Society, May 12, 1874, the following officers were elected for the ensuing year: *President*, R. W. Taylor. *Recording and Corresponding Secretary*, L. Duncan Bulkley. *Treasurer*, F. L. Satterlee. *Executive Committee*, F. P. Foster, E. L. Keyes, F. R. Sturgis, President and Secretary *ex-officio*.

DR. GOUVERNEUR M. SMITH.—The chaste and scholarly memoir of the late William C. Roberts, M.D., read by Dr. Gouverneur M. Smith before the New York Academy of Medicine, has been published in handsome book form by the friends of the subject of the sketch. As a memoir it is a model.

DR. S. CARO, of this city, has been appointed Corresponding Member of the Royal Academy of Medicine, Palermo, Italy.

UNIVERSITY OF THE CITY OF NEW YORK: MEDICAL DEPARTMENT.—The following appointments have been made in the Medical Department of the University of the City of New York: Wm. A. Hammond, M.D., to fill the Chair of Diseases of the Mind and Nervous System; John T. Darby, M.D., late Professor of Surgery in the University of South Carolina, as "Professor of Surgical Anatomy;" and Montrose A. Pallen, M.D., late Professor of Gynæcology in the Coll. of Phys. & Surgeons, St. Louis, as "Lecturer on the Surgical Diseases of Women."

NUMBER OF PHYSICIANS IN FRANCE.—The following figures, recently published, on the distribution of medical men over the country, are of interest:—In 1866, in 4 departments of France, there existed 1 doctor to about 2,000 inhabitants; in 21 departments, 1 to to 2,000 or 3,000; in 34 departments, 1 to 3,000 or 4,000; in 16 departments, 1 to 4,000 or 5,000; in 2 departments, 1 to 5,000 or 6,000; in 6 departments, 1 to 7,000 or 9,000, and in 1 department, 1 to 10,576. As the mean average of population put down by the reporter as being necessary to secure a livelihood of a medical practitioner is 3,000 inhabitants, it follows that there are sixty-three departments of France where this average is not attained. The total number of medical men appears to be stationary. In 1847 there were 10,643 doctors of medicine, making 1 to 3,244 inhabitants; in 1866 the number was 11,525, and in 1872 (making allowance for the loss of Alsace and Lorraine) the number was only 10,766, being 1 to 3,353 inhabitants, so that as the number of *officiers* desanté has notably diminished, and as that of doctors of medicine has not increased, it follows that the total number of medical practitioners in France is greatly on the decrease. Thus, in 1847, according to the report, the total number was 18,099, being one practitioner to 1,895 inhabitants; in 1866, 17,192, or one to 2,232; and in 1872 only 15,419, or 1 to 2,341 inhabitants.

CREMATION.—According to *The Lancet* cremation makes progress in Germany, eighty-two cities now possessing cremation societies. The society at Berlin has received intelligence that the new furnace invented for the combustion of bodies by Professors Reclam and Siemens was tested on the 3d of June, and completely satisfied its constructors. Two hundredweights of animal carcase were consumed in about an hour and a half—reduced to white ashes, at no more than three shillings outlay. During the process no sound nor smell was appreciable. Solving as it does the question of cremation, Messrs Reclam and Siemens' contrivance has just met with a rival in the device of Dr. Steinbeis, President of the Central Institute for Trade and Industry, at Wurtemberg. He proposes that the corpse should be placed in a trough made of cement, and be filled up with liquid cement so as completely to cover the dead body. The cement soon hardens and absorbs all the moisture from the body—converts it, in fact, into a preservable mummy at small expense and trouble. As soon as the cement hardens, the square coffins may be piled one upon the other like blocks of stone, and the corpse is literally interred *in* instead of under its gravestone.

CONDENSED MILK IN GERMANY.—In German pharmacies the sale of children's food and condensed milk has so much increased of late that it would seem as if, in the large towns at least, this is the only method employed of feeding infants. In Berlin the condensed milk manufactured by the original company at Cham is in great favor, and the Berlin apothekers have officially approved this preparation. But other brands, respecting which nothing but good can be said, are also in the market, are cheaper, and find a large consumption.

CARBOLIC ACID is recommended by Ebstein and Müller for internal use in diabetes. Five to seven grains may be administered daily, in divided doses.

DR. H. M. SPRAGUE.—At a special meeting of the Yonkers Medical Association, held June 1st, 1874, the following resolutions were unanimously adopted:

Whereas, Death has, for the first time since its organization, entered the ranks of our association, and borne from us one of our most valued members, and an esteemed ex-president, Dr. H. M. Sprague; therefore, be it

Resolved, That in the death of Dr. Sprague we mourn the loss of a valued brother, a true-hearted, noble man, a skilful physician, and a devoted student of medical science.

Resolved, That we tender to the friends and family of our departed brother our heartfelt sympathy in this dark hour of their affliction.

Resolved, That we attend the funeral of Dr. Sprague, from his late residence in Fordham, in a body.

Resolved, That a copy of these resolutions be sent to the family of Dr. Sprague, and also published in THE MEDICAL RECORD, *The New York Medical Journal*, and the local newspapers.

GEO. F. JACKSON, M.D., *President.*
JOHN PARSONS, M.D., *Secretary.*

A NEW MEDICAL SCHOOL IN INDIANA.—Dissensions among the Faculty of the Indiana Medical College have led to the organization of a new institution, to be called the "Indiana College of Physicians and Surgeons," and to be established also at Indianapolis.

A NEW SIGN OF DEATH.—M. Bouchut, who, in 1849, published a means for discovering the existence of death by cessation of the heart's action, as shown by auscultation and the introduction of an acupressure needle, has called the attention of the profession to still another sign, viz., pneumatosis of the retinal veins. This is readily appreciable by the ophthalmoscope, and is claimed by M. Bouchut to be an immediate and certain sign of death. The veins show an interruption here and there to the current of blood within them, like that seen in the column of a thermometer composed of colored alcohol.—*Gazette des Hôpitaux.*

THE NEXT MEETING OF THE BRITISH PHARMACEUTICAL CONFERENCE will take place in London next August.

THE TRANSACTIONS OF THE MINNESOTA STATE MEDICAL SOCIETY, ST. PAUL, 1874, have been received. At the sixth annual meeting, held at St. Paul, on the 3d and 4th of February last, Dr. N. B. Hill, of Minneapolis, was elected president, and Dr. J. E. Bowles, of St. Peter, Min., corresponding secretary. Most of the business of this and the previous semi-annual meeting, held in June, 1873, at Maerkato, appear to have been connected with ethical questions and the finances and business of the association proper. Besides the reports of the various committees, a paper was read by Dr. H. C. Hand on "The Abdominal Branches of the Pneumogastric Nerves, and their Relations to the Treatment of Choleraic Discharges."

CREMATION.—*The Lancet* says that a recent number of *The Academy* contained a paragraph to the following effect, extracted from the *Spenersche Zeitung*, which, with an eye to possible contingencies, has, with grim facetiousness, inserted in its feuilleton a specimen of the cremation announcements, which in Germany doctors generally, and in England Sir Henry Thompson specially, no doubt anticipate will be of ordinary occurrence among the coming race. The sample announcement reads: "To-morrow, at 3 P.M., I shall burn my mother-in-law."

FOOD FOR INFANTS.—*Apropos* of the recent evidence as to the chemical value, or rather valueless nature, of the foods advertised for infants, the London *Standard*, alluding to the enormous amount of starch contained in these diets, says it is identical with the material

used for stiffening our shirts and collars, and has probably by this time stiffened out a good many infants.

THE LONDON SCHOOL BOARD has passed a resolution in favor of making plain cookery and the household work connected with it part of the education of girls.

ELECTROLYSIS EXTRAORDINARY.—A curious story comes from Whitehall, in this State. Three years ago General Kilpatrick had a remarkable operation performed upon him by a physician in New York, who removed a fleshy formation from the general's neck by filling it full of needles, and then attaching a galvanic battery to it. Ten minutes after the current of electricity was let on, the bunch had entirely disappeared. A more extraordinary operation than this was, however, performed by a Whitehall physician a few days ago, if we are to believe the *Whitehall Times*. A gentleman who had been suffering from a superabundance of adipose tissue consulted the physician, asking for relief from its burden. The doctor told him he could relieve him if he would consent to a painful operation. The gentleman consented, and with the medical practitioner entered the telegraph office at that place. The fat man was requested to remove his coat and vest, after which the physician surrounded him with wires, attaching the ends to a powerful battery. At a signal from the doctor, Manager Eddy let on the current. The patient writhed and twisted when he felt the current passing around him; still he stood like a martyr. Presently he began to shrink; he grew smaller and smaller; his clothing hung in bags about his fast diminishing form; the doctor felt much pleased at the result of his experiment; while the formerly fat man's joy was very great, although he seemed to be suffering acute pain. All of a sudden there was heard a loud clicking at the instrument, as if Pandemonium's great hall were let loose. The operator sprang quickly to answer the call. He ascertained it was from the New York office. He quickly asked, "What's up?" An answer came back as if some infuriated demon was at the other end of the wire. "What in thunder are you about? Cut off your wires quick—you are filling the New York office with soap grease."

LAW TO REGULATE THE PRACTICE OF MEDICINE IN THE STATE OF NEW YORK.—Just before the adjournment of the State Legislature, the following law was passed. We have not learned whether it has or has not received the signature of the Governor:—

"*Section* 1. Every practitioner of medicine or surgery in this State, excepting licentiates or graduates of some medical society or chartered school, shall be required, and they are hereby commanded, to obtain a certificate from the censors of some one of the several medical societies of this State, either from the county, district, or State society; which certificate shall set forth that said censors have found the person to whom it was issued qualified to practise all of the branches of the medical art mentioned in it. And such certificate must be recorded in a book provided and kept for the purpose by the county clerk of each county in the State.

"*Sec.* 2. The censors of each medical society aforesaid shall notify all practitioners of medicine and surgery of the terms and requirements of this act, and shall request such persons so notified to comply with those requirements, within thirty days after such notification; and if such persons shall not within the time specified in the notice, or within such further time as may be allowed by special arrangement with said censors, not exceeding ninety days, comply with the requirements herein made of physicians or surgeons, as the case may be, such persons shall thereafter be subject to all the provisions and penalties prescribed by this act, for any violation of the same, and the president of the society making such request shall, and he is hereby required to, at once commence the proceedings authorized by this act against such person.

"*Sec.* 3. It is hereby declared a misdemeanor for any person to practise medicine or surgery in this State unless authorized so to do by a license or diploma from some chartered school, State board of medical examiners, or medical society, or who shall practise under cover of a medical diploma illegally obtained; and any person found guilty of such a misdemeanor shall, for the first offence, be fined not less than fifty nor more than two hundred dollars; for any subsequent offence, not less than one hundred nor more than five hundred dollars, or by imprisonment not less than thirty days, or by both imprisonment and fine; and all such fines shall go into the county treasury of the county bringing such action."

PHYSIOLOGY IN CHINA.—*The Scientific American* gives us the following summary of the notions of the Chinese on physiology:—According to them the chief organ of the human economy is the spleen. Its functions are manifold. It rubs against the stomach and grinds the food; it keeps up the proper degree of heat in the five *toang;* it moves the muscles and the lips, and thus regulates the opening of the mouth; furthermore, it directs our secret ideas so that they become known to us. The liver regulates the tendons, and ornaments the nails of the hands and feet. The heart regulates the blood-vessels, beautifies the complexion, and by its means we are enabled to open the ears and move the tongue. Of the circulation of the blood, the Chinese are profoundly ignorant. The kidneys govern the bones, beautify the hair of the head, and open the orifices of the two *yin*. The diaphragm, being spread out like a membrane beneath the heart, and joined all round to the ribs and spine, covers over the thick vapors, so that the foul air cannot rise. The gall-bladder is the seat of courage; hence the popular belief that whoever eats the gall of a brave man or beast will inherit the valor of its original possessor—a belief which frequently leads to a lively competition for the galls of remarkable animals.

Of the function of the brain the Chinese have but a vague idea, still they think it has something to do with the intellect. In proof of this suspicion, they offer the case of a man of great renown for his learning, whose misfortune it was to fall from a horse with such violence as to break his skull. The physician who was called to treat the case hit upon the happy thought of supplying from the skull of a cow the portion of brain the wise man had lost. The operation was only a partial success, since the subject's eminent powers of mind remained in utter prostration, and from that time forward he was a very different man from what he had been. Whether his residual intelligence exhibited any bovine characteristics our informant unhappily neglects to say.

Hereafter we expect to see this case given as additional evidence that the Chinese are the original discoverers of everything. It is certain that it greatly antedates the operation recently reported from Leipsic for the edification of rural editors: a case in which the brain of a good-natured wine-seller, dead of heart disease, was transplanted into the cranium of a soldier condemned to death for murder, with a corresponding transference of mental and moral traits. The Leipsic surgeon is plainly no better than a skilful imitator.

Medical Department of Life Insurance.

THE POSITION AND DUTIES OF THE MEDICAL EXAMINER.

By Dr. J. WILLIAMSON,

of Ottumwa, Iowa.

(From a paper read before the Iowa State Medical Society.)

A few words on the relation of the medical examiner to other parties.

In these days of money-getting the first question that a man asks himself, or the agent who may be soliciting, is, Will it pay? Will the money which I shall have to pay out from year to year in the way of premiums, return to me, or my legal representatives, with fourfold, tenfold, or a hundredfold increase? If the agent succeeds in convincing him that it will be a paying investment, then he is ready to insure, and the medical examiner is called upon to ratify a contract entered into for their mutual benefit. When I say that the examiner is called upon to *ratify* the contract, I speak of the attitude of the parties to each other and to the transaction. Through the whole affair they have stood to each other in antagonistic relations, as ordinary business men, each bent on getting as good a thing as possible. It is essentially a business transaction, and it is expecting too much to suppose that either one is going to ignore his personal interests, and exclude everything else from his mind except truth and right. Consciously or unconsciously, there come into the mind elements and considerations which have much to do with the decision arrived at. In speaking thus of soliciting agents we would not willingly do them an injustice. As a class we believe them to be honorable men. Neither would we speak too disparagingly of the "average man." But such is human nature and such the position of the parties that, as a general thing, just in proportion as the parties feel they have done a neat thing, will be the difficulties of the examiner in getting a correct idea of the applicant's insurability. Not that I believe all men are liars and swindlers, but we all know how unconsciously the best of men are swerved, by their desires and interests, from the strict line of rectitude. Besides, it is said that corporations have no souls, and it is a curious fact that men of reputed honesty and uprightness of character feel that in dealing with corporations they have a license which they would scorn to use in transactions with their neighbors. The case of the person to be examined is therefore the very reverse of that of the invalid, for the latter comes before the physician revealing, without a question, all his weak points, real and imaginary, that he may be restored to health; and the same is true of the military conscript, who is solicitous lest the examining surgeon should overlook his physical weaknesses.

From this it follows that the medical examiner for life insurance should receive the applicant's statements with a good degree of allowance, and should verify them in every case by a close scrutiny into the working of every bodily function, and a strict inquiry into his family history, and that he should make no account whatever of the desires of the agent.

Another thing follows from what we have said, viz.: that medical examiners should be men possessing a thorough knowledge of medical science, especially of physiology and pathology; they should be men of clear, logical minds, and should have a good deal of the kind of talent found in first-class lawyers. Besides these requisites he should be conscious of his *entire independence* of the parties to be affected by the examination, and, that this may be the case, his appointment should never be made through the agent, nor the office held contingent on his will. Medical examiners should receive their appointment through a State or District Medical Board or Supervisor, and in no other way. Until then incompetent medical examiners will be the rule.

HALF-WAY MEASURES.

From a recent number of the *Baltimore Underwriter* we learn that the representatives of the Southern life insurance companies have lately met in convention and transacted business of importance. The only thing, however, of interest to medical men is the subjoined report, presented to the convention by its "Committee on Medical Blanks and Examiners:"

The undersigned, your committee to whom was referred blank forms of medical examination, and the best mode of securing capable and honest medical examiners, beg leave to submit the following report:

1st. After a careful examination of the various forms submitted, we are of the opinion that each contains all the essential questions necessary to a proper estimate of the risk if truthfully and intelligently answered, and may be safely remitted to the medical advisers of the respective companies; but with a view to secure to all the benefits which may arise from subsequent improvements, and with a further view of establishing comity between the offices of life insurance companies, we respectfully recommend that they interchange their blanks, together with such suggestions of improvement as may be made from time to time.

2d. With regard to female risks. The committee think it proper to say that the data so far furnished are insufficient and contradictory, and that it would be manifestly unfair, as well as improper, to jump hastily to conclusions. In view of this fact, the committee respectfully ask that the subject be referred to the Committee on Mortuary Statistics, to report them as fully as possible at the next annual meeting of this organization.

3d. The chief medical advisers of the Southern life insurance companies shall unite to form an advisory board, which shall, as the medical representative body of the companies, select a thoroughly qualified physician as Supervisor of Medical Examiners for each State, upon the recommendation of the members of the board whose companies are transacting business in such State. He shall be paid a stipulated salary and travelling expenses, and his duties shall be to select competent examiners throughout his district and reject all others, making contracts with the former for the fees for each examination. Said Medical Supervisor, when not otherwise engaged, shall examine for any of the companies composing the Medical Association, and his salary shall be paid pro rata by each company doing business in his district. Companies not represented in the association may share the privilege of having their examinations made by said Medical Supervisor and appointees by paying their pro rata of his salary and expenses, and the examiner's fees. No examination shall be accepted, under any circumstance, from a physician who has not received the full endorsement of the Supervisor.

4th. Each company represented in this convention shall, on the rejection of an applicant for insurance, immediately inform the others of the fact, together with the reasons therefor.

5th. It is deemed contrary to insurance interests to assign to agents or applicants the causes of rejection.

6th. We further recommend that all answers to questions in the application affecting the insurability of the applicant be filled by the medical examiner.

F. A. Atchison,
C. H. Perrow,
W. C. Robins, } *Committee.*

Upon the first reading of the transactions of the convention, we congratulated ourselves that this excellent report had been adopted and that the course now pursued by a few careful companies in the North, in the selection of medical examiners, was to be pursued hereafter by all the Southern companies. Upon a second reading, however, we discovered the fact that only sections 4, 5, and 6 had been adopted. In other words, it was voted not to lay the axe to the root of the present unsafe and demoralizing system of appointing examiners, but simply to surround it by one or two additional safeguards. The falling of the old tree might stir up a rebellious spirit among the agents of the old régime, and the officers of the various companies hardly cared to face this disturbance in the camp.

As regards section 1, we regret to see that the committee did not improve the opportunity at their command to present to the convention, for study, amendment, and eventual adoption, a uniform list of questions for the medical examiner to answer. It is a source of considerable annoyance to a physician who examines for several companies to fill in correctly so many different forms of blanks; and, on the other hand, there is no good reason why the companies should not all make use of the same style of blank.

Section 2 disposes of the question of female risks in the only manner possible under the circumstances.

Section 3 strikes at the very root of the prevalent method of appointing medical examiners, and offers, in its stead, a very simple and most effective method of elevating and purifying this branch of life insurance business.

Sections 4 and 5 require no special comment; and section 6, though embodying a very sensible and important change, should have been a part of section 1, which treats of medical examiners' blanks.

Let us hope that, by the time the next convention of Southern life insurance companies meets, its timid members will have gathered courage enough to adopt the most important part of the recommendations made by their medical committee, namely, that part which refers to the reorganization of their medical staff.

ON THE WASTE OF LIFE BY PREVENTABLE DISEASE.

By R. BRUDENELL CARTER, F.R.C.S.,

OPHTHALMIC SURGEON TO ST. GEORGE'S HOSPITAL.

(*Continued from* MEDICAL RECORD *of June* 15.)

Upon the whole, then, I think I am entitled to say that the effect of preventable disease, in this country, every year, is to inflict upon the community a pecuniary tax of not less than three millions sterling, and probably of much more than that sum; to sicken at least six hundred thousand persons; to destroy prematurely at least one hundred thousand lives, many of them of the highest value; to cripple, in some way or to some extent, in mind or body, an unknown number of victims, leaving them to be more or less encumbrances to their own generation, and to be the progenitors of children who will hand down an inheritance of sickness or debility to generations yet to come; and, lastly, besides causing an incalculable amount of merely mental sorrow, to entail physical misery, destitution, social degradation, and even lapse into crime, upon many of those whose main-stay in life it has destroyed. It is often a wholesome mental exercise, with reference to arrangements to which we have become accustomed, to try to stand for a moment, as it were, aloof from them, and to ask ourselves how we should regard them if they were offered to our acceptance for the first time. I think it cannot be doubted, if we could place in this light the evils and calamities that I have endeavored in faint outline to describe, that we should all look upon them as something too monstrous to be endured with patience. We should say that they threw into utter insignificance most of the so-called great questions with which politicians occupy themselves, and that they imperatively demanded the most strenuous efforts of the highest statesmanship for their removal. But so absolute is the dominion of habit over the human mind that we now suffer these evils to flourish practically unchecked, and make scarcely a single earnest effort to control them.

To this statement it may be objected that we have had, during the last few years, a good deal of sanitary legislation, and that the subject is one that has been almost continually kept before the attention of the public. You will, perhaps, remember the old story of Tillotson's appeal to Garrick to explain to him why it was that the stage could sway the emotions so much more powerfully than the pulpit. "The reason is," said the great actor, "that your Grace utters the most sublime truth as if it were fiction, while I utter fiction as if it were truth." Now our sanitary legislation, in most of its parts, has been so constructed as to be almost inoperative; and our sanitary talk, when it has been true, has usually been uttered in the precise manner that Garrick condemned. In mediæval times, in the times of the Plantagenets for instance, several matters of importance for the preservation of the public health were well understood in England; and both Edward II. and Richard II. enacted some curt and wholesome laws, having neither the permissive character nor the ambiguous phraseology of many modern ones, for the punishment of persons who offended against the sanitary lights of those days. The time at my disposal, however, will not permit me to linger over the remote past; and I must come at once to that great measure, the foundation of almost everything that has been done for the diminution of disease in our own day, the Registration Act of 1837. Until this act came into operation, and indeed until it had been in operation for a considerable time, there were no data, outside the metropolis itself, on which sanitary reform could be founded; for no one knew with any approach to accuracy, or in any manner than by conjecture, even the probable extent of the evils against which the law was required to contend. The references of deaths to their causes is still, in many respects, less accurate than could be wished; but the errors probably counterbalance each other to a great extent, and I have been able to-night to place before you certain figures expressing mortality, and to found upon them certain estimates about cost and prevalence, with full confidence that I could not far mislead you. The revelations made by the national death registry speedily had the effect of calling attention to the ravages of preventable disease; but it happened, most unfortunately, that the question somehow became the property of a comparatively small coterie of persons, possessing, indeed, much sincerity and earnestness, but not gifted with minds that could in any high sense be called philo-

sophical, singularly prone to the sins of premature generalization and of presumptuous judgment, and altogether abandoned to the belief that they were the sole depositories of knowledge on the subjects that they had contrived to make their own. Such, I think, is not an unfair description of the curious organization that was denominated the General Board of Health, and that bore sway in England from 1848 to 1858. Its brief reign was characterized, if not by the origin, at least by the first currency of a strange delusion, which has ever since prevailed extensively and which has been the fruitful parent of an infinity of mischief. This is the erroneous belief that the requirements of preventive medicine are of such a nature that they may easily be understood by the people, and easily put in force by any unskilled person. The General Board of Health may be said to have staked its existence on the dogma that dirt is the cause of disease; and wherever disease was rampant, the Board, instead of sending an expert to trace it to its origin, sent an inspector, an engineer, a lawyer, an amateur, or what not, to look for dirt. If he found a muck-heap within a mile of an epidemic, the inspector would feel that he had not only done all that could be required of him, but that he had even exercised extraordinary acuteness of observation, and that he had furnished an exhaustive explanation of the occurrences. If when the muck-heap was removed the epidemic did not cease, it clearly ought to have done so, and the case was so much the worse for the facts. The General Board of Health arrived at the further conclusion that an accumulation of excreta constituted the most noxious form of dirt, and that the best method of disposing of excreta was by means of water-closets. Their inspectors, therefore, whenever they were asked to advise for the improvement of the health of a locality, advised the immediate adoption of a water-closet system. It did not matter whether the prevailing maladies were actually due to faulty methods of dealing with excreta, or to other and wholly different causes; and it mattered still less whether the necessary water-supply could be procured, or what might be the ultimate destination of the sewage. The panacea was in all cases the same, and its perpetually recurring failures were attributed only to its imperfect application. The whole business was like Albert Smith's description of an extinct animal called a "grinder," some specimens of which still lingered upon the earth when I was young, and were engaged in preparing medical students for examination at the "College" and the "Hall." Albert Smith's grinder had told his class that carbonate of lime was the best antidote for certain corrosive poisons, and that, if asked what they would do if chalk was not immediately procurable, they were to say that they would scrape whitewash from a wall with a fire-shovel. "It sounded practical, and would please the examiners." He then turned briskly to a shy and reticent student, and said: "Now, Mr. Meek, what would you do if you were sent for to a man who had hanged himself?" "Please, Sir," said Mr. Meek, "I should scrape the wall with the fire-shovel." And I have no doubt that the prototype of Mr. Meek, if not actually a member of the General Board of Health, was at least one of its most trusted inspectors. Some of us, doubtless, have heard Dr. William Budd describe his inquiries into the origin of the Cowbridge fever. This fever attacked a number of ladies and gentlemen, who, in November, 1853, it being race week at Cowbridge, had attended two balls held at the principal inn there. No less than eight of the sufferers died; and, as they were all people of some wealth and station, the occurrence attracted much attention, and the General Board of Health sent down an inspector. The ball-room had been made by the temporary conversion of a loft over a large stable; and to this stable the inspector ascribed the fever. Dr. Budd proceeded to the place, as if he were a chance traveller, and discussed the outbreak over a glass of wine with the landlady. He soon ascertained from her that, although the disease had originated in the stable, no horses had died, and no helpers had been attacked. By skilful cross-examination he discovered that a gentleman had been ill with typhoid in the hotel before the balls, and had left, when barely convalescent, in order to escape from them. His excreta had been conveyed into a cesspool that leaked directly into a certain well; and the water from this well had been used in making beverages for the dancers. The members of the Board of Health, however, notwithstanding such evidence as this, had an almost personal hatred for facts that supported a belief in contagion, or in anything but dirt; and they used their whole influence, and their whole printing power, during a period of ten years, for the purpose of discrediting everything that told against the hypothesis they had espoused. They greatly injured and retarded the cause of sanitary reform, by furnishing a signal example of how little those who professed to be authorities might really be worthy of trust, and by supplying a tangible ground for the scepticism of common-sense people. But they, nevertheless, did good service, partly by accustoming the public mind to the idea that some legislation about health was really called for, and partly by directing attention to the enormous prevalence of preventable disease.

About the same time that the Public Health Act, by which the General Board of Health was created, received the sanction of the Legislature, an Act was also passed which empowered the Commissioners of Sewers for the city of London to appoint a medical officer of health. The office was conferred upon Mr. Simon, who held it until 1857, when, the General Board of Health having at last discovered its need of medical advice, he was appointed to be its medical officer. In the following year, when the General Board of Health was extinguished, he was transferred to the headship of the Medical Department of the Privy Council.

It is very difficult, in the case of one who is still living in our midst, to speak with the impartiality of history concerning the quality of his work. But the office with which you have honored me demands that I should at least strive to fulfil its obligations, and Mr. Simon forms the central figure in the picture that I have next to draw. Already, in 1848, a distinguished pathologist, and surgeon to a great hospital, he was not to be deluded by the shallow sophistries that prevailed among men in authority. He saw, with the clear insight of genius, that many of the questions concerning which it was fashionable to dogmatize were insoluble; some, perhaps, from their very nature, some from lack of evidence; and that, with regard to the latter class, the one thing needful was patient and careful investigation, conducted by trained scientific inquirers. He saw that an epidemic outbreak, instead of being at once traceable to the presence of a midden, was probably the ultimate result of a large number of concurring conditions, among which, indeed, the midden might play a part, but each of which required to be studied in all its bearings. He saw that this study, in order that it might be conducted fruitfully, required certain kinds of knowledge and certain habits of mind; and that the unverified conjectures which

engineers and lawyers described as their opinions about the causes of disease were simply so much rubbish, impeding the footsteps of the genuine and competent inquirer. During his period of duty, as medical officer of health for the City, Mr. Simon succeeded in removing from his district nearly all the manifestly unwholesome conditions that had before prevailed there, while he yet committed himself to no more than this, that the arrangements which he condemned were necessarily evils in some degree, and that they ought to be altered for the better. He published nine successive annual reports, which have ever since been accepted as types of what such reports should be, and above all, he made no mistakes. During his whole official career, I do not remember a single sanitary matter in which he has ever jumped to a conclusion, in which he has ever gone a step farther than carefully observed and well recorded facts would carry him, or in which his opinion, once given, has either been overturned in controversy or falsified by events. When he became chief Medical Officer of the Privy Council he proceeded to organize a staff of competent observers for the investigation of disease; and, by the aid of such men as Buchanan, Seaton, Radcliffe, and Burdon Sanderson, he set himself to unravel the profoundly difficult and complicated questions that surround the origin and propagation of epidemics. The department of which he was the head became a training school, in which young medical men were taught how inquiries of this kind should be conducted, and by what sources of error they are beset. The junior inspectors, selected on account of their presumed or proved aptitude for scientific research, when employed in investigating the origin and diffusion of local outbreaks of disease, had the great advantage of being able to submit their draft reports to the criticism of their immediate chief, by whom probable sources of error were pointed out, and doubtful questions were suggested as matters for further inquiry, before the reports were laid before the Parlimentary head of the department, and were finally adopted and issued as its work. In this manner was brought about the absolutely unrivalled accuracy for which these documents have been distinguished, and which has caused the yearly volumes containing them to be in a demand far exceeding the supply, as the most precious records of methodical sanitary investigation. Unlike the General Board of Health, the Medical Department of the Privy Council has had no theories, and its function has been only to learn and to declare the truth. Even in such matters as the propagation of cholera and of enteric fever by water contaminated with excreta, it has done nothing more than to establish what has actually occurred in this place and in that, never affirming that a different order of events might not be found elsewhere. Its inspectors, when called upon to advise for the improvement of the health of a locality, have had no universal panacea, either water-closets or any other. They have not scraped the wall with the fire-shovel. They have everywhere inquired into the existing conditions, in the same manner in which they would have inquired into the symptoms of a patient, and they have prescribed with reference to the facts that their inquiries brought to light, meeting local authorities in a spirit of cordial sympathy with their difficulties, and always helping them to do what was best in the actual circumstances of the case. When, for instance, the question has been one of the disposal of excreta, the medical inspectors have told local authorities how similar conditions have been met elsewhere, by what methods and with what success, and have thus brought the experience of all England to bear upon the wants of each place to which their official duties have called them. As a whole, therefore, the department was both a place of research in which certainties were surely, if slowly accumulated, and a furnace in which sanitary knowledge was tried, and in which the errors of hasty generalization were exploded. At the same time, it was a centre which had established the best relations with local authorities all over the country, and its officers were hailed as friends in council wherever they bent their steps. Besides this, the supervision of vaccination had brought the medical inspectors of the Privy Council into contact with medical men all over England, on a system which ought to have furnished a model for the relations to be established between the Central Department and the medical officers of health. When Mr. Simon took charge of vaccination, it had been brought to the lowest depths of muddle by the mismanagement and the parsimony of the Poor-law Board, and was in many places very carelessly and inefficiently performed. But, after a while, each public vaccinator found himself visited by an inspector of his own profession, whom he was compelled to recognize as being perfectly master of the matters to be inquired into, who supervised his work, who pointed out his errors, who recognized and was able to reward his merits, who advised him in his difficulties, who guided him along the road which he ought to travel, and who was a consultant to whom at all times he might refer. The result has been that the vaccinators, no longer scattered units, are all working upon the same lines for the attainment of the same ends. The standard of vaccination has been greatly raised, and we may reasonably look forward to a time when the operation will no longer be in danger of falling into disrepute from inefficient performance, or of conveying other diseases from the careless selection of vaccinifers. Such services would, I need hardly say, in any other country, have secured to him who had rendered them an honored position in the State; but with us they have been left unrewarded, and, save by the homage of all capable of appreciating them, unnoticed. Mr. Simon is recognized over the whole civilized world as one of the first of scientific Englishmen, as the greatest authority, past or present, upon everything connected with preventive medicine, and as the source of nearly everything that is certainly known concerning the origin and modes of propagation of epidemic disease. From the height of this eminence he has had to do battle, for the very existence of his Department, with an adversary who is no more than a party politician. . . . . .

Now sanitary legislation cannot be made to play this part, because there is complete agreement with regard to the ends sought to be attained. I know of no party that makes dirt the symbol of its union—I cannot conceive that any politician will ever become a Secretary of State by his pertinacious advocacy of disease. There is no such rallying cry as "Our old fever, and our new epidemic!" And so the good cause languishes for want of opposition; while those who have a pocket interest in any of the causes of pestilence are shrewd enough to hold their tongues. Another difficulty, inherent in the nature of the case, arises from the sort of feeling that men entertain with regard to dangers which they know to be real, but from which, after all, they fully expect to escape, and concerning the details of which they are, and prefer to remain ignorant. Another, and perhaps the most important of all, and one moreover which we are bound to face, arises from the scepticism of the educated public with regard to the conclusions of medical science. Men say, and from this point of view I think they say justly, that doctors often make mistakes, that we confessedly know very little about

many of the questions with which we have to deal—that we have not cured consumption, or gout, or cholera, that we are unacquainted with the causes of many diseases, and so forth; and on these grounds they feel an unwillingness, not altogether unreasonable, to submit to restrictions, or to spend money, or to do anything that is disagreeable, and that may, they think, after all, perhaps, lead only to disappointment. This sort of feeling seems to me to be on the increase in society; and it has been materially strengthened by the shallow dogmatism of the mere "dirt" school, and by that utter break-down of the Acts of 1871-72 which I have endeavored to trace to its true causes. People in general do not know, and cannot be expected to know that many of the so-called sanitary reformers of a few years since, who attracted attention by their earnestness and self-confidence, and who came to be regarded as the representative men of the movement, were people who had never labored at all at the investigation of facts, who shut their eyes resolutely against everything that did not coincide with their own doctrines, and who never commanded the confidence of the medical profession. Neither do they know that the so-called Local Government Board has acted from the first in total disregard or defiance, not only of medical opinion, but even of medical knowledge; as sagaciously, that is, as one who should try to build a house from the roof downwards, without reference to the law of gravitation. The general belief is, I have little doubt, that the doctors have had their innings, and that they have not only made no score, but that they have shown their inability to play the game. We, in this room, are well assured that we have, even now, positive knowledge by which, if we could apply it, we could greatly diminish disease; and we are also assured that many of the defects in our knowledge, with which we are taunted, are the direct results of the want of certain powers for which we are ready to ask. Take, for instance, the case of the cause of scarlet fever. A distinguished Fellow of this Society holds that scarlet fever can be produced anew by the decomposition of blood, and another, that it is liable to arise spontaneously in any large aggregation of children. I can only meet either of these views by the Newtonian phrase, "It may be so;" and I shall never be able to do more until society will help me by placing scarlet fever under some kind of restraint, by limiting the ordinary channels of its diffusion, and thus by narrowing down the inquiry within practicable bounds. I once lived near to some people with whom I had no acquaintance, but who had young children; and these children were accompanied in their walks by a very pretty, gentle, playful dog, which we came to know well by sight. One day this dog found its way into my garden, where it joined my children in their play, and, as we suppose, gave them all scarlet fever. The children to whom it belonged, we found afterwards, were all down with the disease, and the dog came straight from their beds to us. So, when scarlet fever appears, and we want to trace it to its origin, we have first to consider that it may have been conveyed in some such unsuspected way as this—from a stray dog, from a beggar, from the messenger of some tradesman, in a public conveyance, in a place of amusement, or by casual contact in the street. It may have been put into the letter-box by the postman, or delivered with clean linen by the laundress. As long as we cannot exclude these possibilities, we shall never have any knowledge of the facts; and therefore, on behalf of the medical profession, I say that our demand is not for any fresh sanitary law-making of the customary kind, but for law-making that shall establish conditions likely to remove our uncertainties. We do not want more power, but more light, and facilities for transforming that light into public opinion as fast as it is obtained. Let us see how these benefits could be secured.

In the first place, perhaps, we should ask politicians to settle, to the satisfaction of the country, a purely political question—that of the incidents of rating. Real sanitary reform, whatever its nature, must cost money, and this money must be drawn from rates.

In the next place, I would impose upon local authorities the same duties as at present with regard to the relief of sickness and destitution, to lighting, paving, and cleansing, to the maintenance of order, and to the protection of property, and I would add to these some others which are now occasionally undertaken, such as the maintenance of a proper gas and water supply, so that no necessary of life in any district should be a monopoly in the hands of a trading company. But in the discharge of these duties I would leave the local authorities, being themselves elected and representative, absolutely unfettered with regard to spending the money of their constituents, and I would also leave them at liberty to frame and enforce any by-laws, not in contravention of the laws of the kingdom, that the circumstances of their several districts might require, or that the public opinion of the inhabitants would warrant. If ratepayers knew that the men whom they elected to be town councillors or guardians would have the power of making by-laws and the power of spending money, the elections would be more carefully conducted than they are at present, the successful candidates would be persons of a very different stamp from some of those who are now returned, and the proceedings of the elected bodies would be subjected to an entirely new kind of scrutiny. While local boards were thus learning the uses of freedom and the elements of administration, time would be afforded for the improvement of the central sanitary organization of the country and for carrying out measures of national importance. Among these the principal would be the complete rehabilitation of the Medical Department of the Privy Council, under whatever name, in such a manner that it might continue to investigate, to advise, and to teach; an improved system of registration, so contrived that it should gradually embrace disease as well as death; and a somewhat close observation of the movements of tramps and vagrants, by whom, I believe, infectious diseases are now largely disseminated. With regard to the first of these requirements I need at present say nothing; but the question of registration is one with which we are less familiar. There can be no doubt, I think, of the great advantages that would accrue from the sort of stock-taking of the public health that would be implied in a complete registration of disease either continuously or at intervals. This is at present impracticable; but Mr. Lewis, of the General Registry Office, has matured and advocated a scheme, which could be easily carried into effect, for the registration of the disease that falls under the notice of public officials, such as the medical officers of unions, workhouses, and jails. The details of this scheme have been published, and are easily accessible; and they have commended themselves, I believe, to all persons practically acquainted with the question, save and except one official, whose work would be materially increased if the suggestions of Mr. Lewis were carried into effect. I feel sure that even this limited registration of disease would prove of immense value in the course of a few years, and that it would pave the way for an extension of the

system. The registration of death might unquestionably be improved in correctness, and the first step to this end would be the payment of a fee for the medical certificate. This fee need only be a small one; and it would not only give the public a claim upon the certifier to be accurate and careful, but it would also form an exception to the systematic injustice by which the Legislature has hitherto compelled the members of our calling to do important professional work for the State without remuneration. Besides these, I have yet another suggestion to make, which will perhaps to some appear startling, but for which I think the time is ripe and public opinion prepared. It is this: that there should be an official declaration to the local sanitary authority, by every medical practitioner, of every case of self-propagating disease that he is called upon to treat. I say "self-propagating," rather than "contagious;" because I should not propose to include any disease that was usually communicated by personal contact only. But I would make it the statutory duty of every doctor, as soon as he saw a case of self-propagating disease, such as fever, scarlet fever, smallpox, and some others, at once to give notice to the local sanitary authority. I would attach a small fee to the notice, and I would punish wilful neglect to give it by a sharp penalty; so that no one could hope to conceal the existence of one of the specified maladies in his family. When a doctor was not called in, the duty of giving notice should attach to the head of the household. I think that the entrance into a district of an infectious disease is a matter of public concern, and necessary to be made known to the guardians of the public health, just as the outbreak of a fire, or the arrival of a gang of burglars, should be made known to the guardians of the public safety. Fires are even more frequent than epidemics; but we do not suffer them to burn unchecked.

With regard to the control or registration of the movements of vagrants—persons wandering from place to place with no visible means of subsistence—I presume the only difference of opinion will be whether the measure is one of sufficient importance to be worth the trouble of carrying it into effect. I think it is, for I believe that a single vagrant, suffering from a mild form of typhoid, may contaminate the watercourses of half a dozen localities. But what I want is, as I have said, knowledge rather than power, or, in the first instance, to be able to track these wanderers with facility, so as to find out and prove the mischief that they do, rather than, without evidence, to arrest their steps.

I have already said that the enforced appointment of a medical officer of health in every district was an absurdity, because there were not a sufficient number of qualified persons to appoint. As a matter of fact, the tenure of office will determine, in every case, after five years; and in many cases, the absurdity has been too manifest to be repeated. But local authorities, in the discharge of their duties, must frequently feel the need of medical advice; and I would have them obtain it just as they obtain any other advice. A board, when in doubt upon a legal question, applies to its legal officer; and he, in case of need, is instructed to obtain counsel's opinion. If this does not settle the point, there remains the resource of an appeal to a central authority; or, in other words, to the law officers of the Crown. Is there any reason why, in like manner, a local authority should not apply, on any question of the public health of the district, to a local medical officer; or why, if he gave an uncertain sound, he should not hold a consultation with some one of larger experience than his own; or why there should not be an ultimate appeal to the central medical department? Of course, in certain localities, the need for medical advice would be so constantly recurring that it would be wise to appoint a medical officer of health, whose knowledge would always be at the disposal of the sanitary authority; but on this point, as on most others, I would leave that authority unfettered. But a medical officer of health, if appointed, should immediately be brought into relation with the central medical department, and should be made to feel himself an outlying officer of that department; to which, also, all reports of self-propagating disease, or other reports made to the sanitary authority, should be forwarded as a matter of course, so that the department would have full knowledge of the sanitary state of every district. It should be empowered, also, to conduct inquiries in every district, either at its own instance or at the request of ratepayers, and to publish the results of these inquiries; showing, as far as they were ascertainable, the causes of the healthiness or unhealthiness of the locality.

Under such arrangements as those which I have endeavored to sketch in this brief outline, which would render every locality responsible for its own condition, and which, while they relieved it from central control, would leave it subject to central inspection and report, I do not doubt that the public health would soon be greatly improved. It must be remembered that a diminished rate of sickness and mortality in a district would mean a very sensible increase in the value of property, and *vice versâ;* so that the potent lever of self-interest would soon become a moving power in the cause of sanitary reform. At first different municipalities would take different courses, and would afford—to borrow a phrase from Cuvier—so many experiments prepared by Nature for the determination of doubtful questions. In one place, for example, the first recorded case of typhoid or scarlet fever would be isolated, and the infection would be suffered to die out, like a match thrown upon a stone floor, at a cost of five or ten pounds. In another place the match would fall as into a straw-yard, and the conflagration would cost, say, a thousand pounds. In one place we should see an enlightened liberality, leading rapidly to a diminution of expenditure, of disease, and of death, and to a corresponding increase in the value of property; in another, a narrow-minded parsimony and a hatred of knowledge for its own sake, leading to extravagant outlay, to sickness, to mortality, and to depreciation of property. These contrasts should be observed in all their features and carefully made known by the central medical department, and they would in time produce their natural effects. Certain places, notably those whose business it is to attract visitors, would always be the pioneers in the path of improvement, and public opinion would in time demand the general adoption of regulations that had proved salutary wherever they had been put in force.

And now, sir, in such brief and imperfect outline as the time at my disposal would permit, I have endeavored to show, first, that the condition of England with regard to preventable disease is such as to call loudly for improvement; and, secondly, that the past failures of sanitary legislation and administration have been mainly due to the neglect, by politicians, of medical science and of medical opinion. I have sketched, also, the methods of procedure which, to my mind, seem calculated to bring about a better state of things. Something I had intended to say by way of peroration; but I have already addressed you for

ninety minutes; and the worst fault of a speaker is to neglect opportunities of leaving off. If my words have been acceptable to this Society, and if they should be endorsed by the mature opinion of its distinguished fellows, they can hardly fail to find favor also with the public. In that case I shall feel that I have done something, however humble, to lighten a burden that presses heavily upon the happiness and the prosperity of our beloved country.

A NOTE ON LONGEVITY.

By The Editor of "PUBLIC HEALTH" (May 16, 1874), London.

In an interesting paper on the Law of Longevity, with special reference to life assurance, written by Dr. Nathan Allen, of Lowell, Mass., U. S., and published in *Public Health* of February 16th, great stress is laid by the author upon hereditariness, or, in other words, long-lived ancestry, as one of the prerequisites of longevity. Dr. Allen remarks: "The influences of hereditary descent have as yet received but little attention, compared with their importance, even from the medical profession, and before they can ever be thoroughly understood, it will be found, if we mistake not, that there exists in physiology, as a fundamental principle, a general law of propagation; and, as a part and parcel of the same, will also be found this law of longevity. In the matter of life insurance a thorough knowledge of these hereditary influences is of the utmost importance."

Several of our correspondents took exception at the time to Dr. Allen's views on this point, regarding them as rather theoretical than actual. It is one of such great importance that any practical light that can be thrown upon it will not be without benefit.

I therefore propose to briefly describe the history of a family which has recently come under my notice, in which this principle of hereditary influence is strikingly illustrated.

The immediate subject of my note is an old man, one David Jenkins, whom I have lately seen professionally, as a matter of charity, he being ill and in necessitous circumstances. Upon visiting him I found a remarkably hearty-looking person, evidently suffering more from debility induced by insufficient nourishment (5s. weekly, out of which 2s. have to be paid for rent, being all the assistance that he and his wife, also aged, receive from the parochial authorities), and from the injurious effects of the unusually cold weather, than from any senile disease, although he is ninety-three years of age. None of the more prominent signs of decay from old age are present. Until a recent date he has picked up a trifle occasionally by doing little odd jobs of work, such as mending chairs (he was formerly a cabinet and chairmaker) and carrying parcels or letters; when in health, the old man is tolerably sound on his legs, and can walk fair distances.

He was born at Swansea, where he passed the first fifteen years of his life; subsequently he went with his parents to live at Bath, where he learned the business of chair and cabinet maker; and during the last thirty-five years he has resided in London, nearly twenty having been spent in the same house.

But the principal point of interest about this case is that David Jenkins is the great-grandson of Henry Jenkins, who would have considerably puzzled disbelievers in centenarianism, if any existed in his time, for he lived to the patriarchal age of 169 years. The best account of this venerable old man is that given by Mrs. Saville, a lady of position, who resided at Bolton, in Yorkshire, where Henry Jenkins also lived. "When I came to Bolton," says she, "I was told several particulars of the great age of Henry Jenkins; but I believed little of the story for many years." One day, however, he happened to call at her house, to ask for some assistance, when she "desired him to tell her truly how old he was. He paused a little, and then said that to the best of his knowledge he was 162 or 163; and I asked what king he remembered. He said Henry VIII. I inquired what public event he could longest remember. He said Flodden Field. I asked whether the king was there. He said, no; he was in France, and the Earl of Surrey was general. I asked him how old he might have been then. He said, 'I believe I might have been between 10 and 12; for,' added he, 'I was sent to Northallerton with a horse-load of arrows, but they sent a bigger boy from thence to the army with them.' All this agreed with the history of that time; for bows and arrows were then used, the Earl was named general, and King Henry VIII. was then at Tournay. It is observable that Jenkins could neither read nor write. There were several old men in the same parish, some reputed to be nearly 100 years old, but they all said that Jenkins was an elderly man ever since they knew him. He told me, too, that he was butler to the Lord Conyers, and remembered the Abbot of Fountains Abbey very well, before the dissolution of the monasteries."

Henry Jenkins died on December 8, 1670, at Ellerton-on-Swale, in Yorkshire. The battle at Flodden Field was fought September 9, 1513, so that, assuming he was 12 years old at that time, he lived to the "amazing age of 169" (as was stated on a monument subsequently erected to his memory by a subscription amongst the inhabitants of Bolton), and thus attained to 16 years' longer existence than old Parr.

I need not discuss the question whether he really reached the great age of 169, or whether he died at a few years under that period. It is sufficient for the purpose of this Note that he lived longer than any other person whose case has been authentically put on record since the commencement of the Christian era.

Of Henry Jenkins's descendants, the particulars are, as might be expected, from their humble position, only slight; but there is no room for doubt upon one point, viz.: that they were all long-livers. David Jenkins tells me that his grandfather was a very old man at the time of his death; and that his father died at the age of 93, from the effects of a rupture through overstraining himself in his work as a chairmaker. Had it not been for this accident he would probably have become a centenarian; and we see that, despite of poor David Jenkins having to contend with the drawbacks of bitter poverty—rendered none the less poignant by the fact that, years ago, he succeeded in elevating himself into a position of comfort and independence as a master-tradesman, which position he subsequently lost through a series of unavoidable misfortunes—he has attained the great age of 93, in the full possession of his faculties, and free use of his limbs, with every prospect of living many years longer, if he should not be crushed under the heavy weight of adversity.

Surely, in the history of this family, there is enough to show that Dr. Allen was not mistaken in his views upon the importance of hereditariness in connection with the subject of longevity.

The Chamber of Life Insurance will hold its next meeting in this city during the coming week. It has work before it of importance to medical men.

A LAYMAN'S VIEW OF THE QUESTION.

(From "The Chronicle.")

No subject connected with life insurance is at present receiving more, or more thoughtful attention, than that of medical examiners, their qualifications, their relation to the companies, the manner of their appointment, and the measure of their compensation. This will be one of the principal topics of discussion at the approaching meeting of the Chamber of Life Insurance, it having already been referred to a competent committee. And it is a subject of transcendant importance to every life insurance company in the land. It has been incompetent medical examiners quite as much as malarious influences that have made the southern business of our life companies unprofitable. And generally, because of incompetency or carelessness on the part of medical advisers, the mortality among insured lives has been of late frightfully increased.

Applicants for insurance are the food upon which life insurance companies subsist—the pabulum of which their future safety, efficiency, and usefulness are built up and perfected, just as the food which man eats gives him strength, repairs the waste attendant upon the performance of the natural functions, and so prolongs his life.

No less care should be used in the selection of the food required in the one case than in the other. Nature's careful guardians in the case of the human body are the organs of special sense. A like supervision over the safety of a life insurance company should be the office of a skilled medical examiner. He it is alone who can decide whether the food presented and ingested will build up into healthy, vigorous bodies, or degenerate into a sapless and decrepid corps of invalids. He alone passes judgment upon its hurtful or beneficial qualities, and thus wields an influence potent for good or evil, not only upon the companies which he may represent, but upon the community at large; for life insurance is a business from which man, in any position in life, may derive benefit.

Every risk assumed upon a recommendation not made by skilled judgment, and based upon strict and conscientious examination, is a fraud upon each and every policy-holder, and another cause of want of confidence on the part of the insuring public.

It needs no acute reasoning to prove that a company which receives and accepts unworthy risks is not a safe company, and outsiders, as they are termed, are by all odds the first to discover such a fault, and seeing it, to avoid involving their fortunes with those of the recklessly managed company which commits it.

Surely no company can be blind enough to its own interest to fail to realize how greatly it is dependent upon the clear judgment of its corps of medical examiners, neither should any medical gentleman assume the duties of this office without conscientious self-inquiry into his own fitness to fill the position, and a clear understanding of the weight of responsibility borne by his shoulders, and the manifold interests affected by the faithful or unfaithful discharge of his duties.

Not only is it work of mere professional acumen, but it is a work which will add more to his own credit, and to the honor of his profession, than any other which he can be called upon to perform; for here it is that the medical examiner should gather the data based upon which the benefits of the good work of which he is the guardian may be disseminated broadcast, and the results of his labor redound to the welfare of mankind in future years.

But still more, and greater than all, the medical man should consider his labor of the most purely philanthropic nature. The fee which he receives will never repay him for the labor expended, scarcely for the time occupied, if he performs his duties conscientiously,—does it so as to show a just appreciation of the confidence reposed in him by the managers of the company,—does it in such a manner that no certificate shall bear his signature without showing him to be master of the teachings of his art, and without reflecting honor upon himself and his professional brotherhood.

To labor solely for the interests of his company is a sacred duty which he has pledged himself to perform, in accepting the appointment of medical examiner; and no consideration of time, business, or pleasure should ever cause him to gloss over an examination, or fail to make a clear, skilful, and satisfactory diagnosis of every case brought under his investigation.

Both the manner of appointing and the method of compensating medical examiners has hitherto been almost as incompatible with the procuring of such trained skill and conscientious fidelity as if they had been especially contrived to defeat it. There is but one fair and reasonable way of compensating the chief medical officers of life companies, and that is by a percentage of the "mortality gains." This will act as an incentive for them not only to be keen and careful in their scrutiny of risks and applications, but discreet in their selection of local examiners as well. And if all the companies doing business in any one locality could be brought to unite upon the same physician as examiner in that locality, he too might be partially compensated in the same way, *i.e.*, by a percentage of what experience should show he had saved to his clients by keeping the average mortality in his district below the tabular mortality.

It is not claimed that this method of compensating medical examiners can be successfully adopted in all places or under all circumstances; but we believe that its adoption in the case of the chief medical director, and his assistants in the larger cities and more important districts, would be a long step and a brave one in the right direction.

Miscellaneous.

Longevity of Medical Men.—According to Casper the average age of clergymen is 65; of merchants, 62; clerks and farmers, 61; military men, 59; lawyers, 58; artists, 57; and medical men, 56. The medium duration of life in Russia he states at about 21 years; in Prussia, 29; in Switzerland, 34; in France, 35; in Belgium, 36; and in England, 38 years. It has been calculated by some statisticians that, under ordinary circumstances, man can live six or seven times longer than the years required to attain puberty. Taking this at the fourteenth year, from 84 to 98 years of age would be the natural life. The *Medical Times and Gazette* lately argued that medical men in England stand high on the scale of longevity. The united ages of twenty-eight physicians who died last year amount to 2,354 years, giving an average of more than 84 years to each. The youngest of the number was 80, the oldest 93; two others were 92 and 89 respectively; three were 87, and four were 86 each, Sir Henry Holland being one of the latter. There were also more than fifty whose average age was between 74 and 75 years.—*Doctor*, April 1.

Original Lectures.

ON EXTERNAL HÆMORRHOIDS.

A CLINICAL LECTURE DELIVERED AT CHARITY HOSPITAL.

By ERSKINE MASON, M.D.,

ADJUNCT PROF. OF SURGERY, UNIVERSITY MED. COLLEGE, NEW YORK.

THE affection of the rectum to which I shall call your attention to-day, no doubt is the most frequent disease to which this organ is subject, and one which you will constantly meet in daily practice. I allude to hæmorrhoids, or, as they are commonly spoken of, piles. In clinical lectures such as these it will not be my intention to give you a minute description of these affections in all their phases; but I shall touch slightly on some of these points in order that you may better comprehend the nature of the cases that are presented to you, dwelling, however, chiefly upon the more practical points in reference to their surgical treatment. Before presenting to you these patients who are suffering from hæmorrhoids, I must tell you first that all are agreed in dividing piles into two classes—external and internal—and that these tumors are often very different as to their minute anatomy, as well as location, symptoms, and indications with respect to treatment. While following this common division of hæmorrhoidal tumors, you must also know that cases present themselves where it may often be difficult to say to which class they belonged, if indeed they could be placed exclusively in either. I am well aware that some authors have laid down rules for your guidance in this respect; but I fear that in your practice you will find many exceptions, which may be of service perhaps only in proving a rule. While these two varieties are very commonly met with in the same individual, you are often to see them separate and distinct. More frequently you will observe external hæmorrhoids unassociated with internal, than internal without the presence also of external. Indeed it would be a rare case, were it of any duration, to find the internal variety devoid of some external growth.

Now, where are we to look for these different varieties of this affection? External hæmorrhoids are those which are seen just at the verge of the anus, and for the most part form just at the lower border of the sphincter, and project outside the verge of the anus. Internal, those that form above the sphincter, and remain either in this locality, hidden from casual observation; or from various causes they too may project outside the external sphincter. Bear in mind it is the situation in which these tumors first arise, not the locality in which the eye may at first perceive them, that places them under one classification or the other. This being the case, are there any reasons why they should arise just at these situations, and not within that portion of the bowel which is surrounded by the circular muscular band which we call the sphincter? The solution of this question, I think, was given by Mr. Brodie, and is to be found in this fact: the hæmorrhoid veins, which is the part chiefly involved in this affection, run on the inside of the sphincter, and while this muscle preserves its tone, dilatation of these vessels is not permitted. It will be only in old standing cases, I think, that a varicose condition of these vessels will here be found.

Before speaking of the causes that give rise to hæmorrhoids, it is perhaps better to consider the nature of these tumors. Though I shall tell you presently that we classify these growths, as to their appearances and pathological tendencies, as well as the locality in which they arise, we may say that no matter whether they be called external or internal hæmorrhoids, they are made up chiefly of a varicose condition of the hæmorrhoidal veins, though sooner or later other elements enter into their formation, such as capillaries, arteries, products of inflammation and integument, according to the particular kind of tumor which we meet with. And here it may be well to enumerate a few of the appearances these tumors present, and the respective characters of each.

First, as to those which are spoken of as external hæmorrhoids. If you examine the anus of a patient with this form of trouble, as for example in the case of this man before you, you will find around the verge of his anus several tumors varying in size from that of a large pea to those of the size of a Lima bean, and in many instances these may be of a much larger growth. Their bases are large, and by separating the sides of the anus, either by the fingers or speculum, you will observe that they run up the sides of the bowel somewhat like pillars. The extent they ascend will vary much in different cases. Some of these tumors are seen to be quite distinct from others, while, again, others merge into one another. The color of these growths is of a bluish appearance at their most dependent portion, a little more of a purple color above, and they may be covered by both mucous membrane and the thin integument which surrounds the anus. This will present to you a fair case of what is known as external piles. In other instances, as with this patient, you will also observe surrounding and hanging from the anus several tags of thickened hypertrophied integument. Some would place these patients in two separate classes of external piles; but I think that this is a useless refinement, regarding, as I do, that these patients exhibit but two stages of what is known as external hæmorrhoids. For let a patient who suffers from varicose external hæmorrhoidal veins neglect himself, then hypertrophies of the integument surrounding the anus will sooner or later be developed. This variety of hæmorrhoids which I have just shown you, is what patients will sometimes speak to you of as blind piles, because they are not so liable to bleed as a class, which we will presently consider.

Let us now examine these tumors as to their anatomical nature, and we find this will vary according as they are examined just after their formation or after some interval has elapsed, and they have undergone pathological changes. At first they consist solely of an enlarged varicose hæmorrhoidal vein. After a time, if neglected and they become the seat of frequent inflammation, we will find that lymph has been poured out in the areolar tissue around these veins, and as a result the size of the growth has increased, and the vein may be so compressed as greatly to diminish its calibre, and at times entirely to obliterate it, so you may find nothing but infiltrated tissue and hypertrophied integument, such as you see in the patient before you. Again, these veins may rupture, extravasating blood into the areola rtissue, giving rise to a tumor in which you will find no vein entering into its formation—merely coagulated blood. This condition, if properly cared for, will often disappear by absorption; yet if constantly subjected to irritation, we shall find that as a result these hypertrophies, or tags of integument, which we so often see about the verge of the anus, will likewise be formed.

With this affection, as with all others, we will meet with them in different conditions. When subjected to little or no irritation, patients will often disregard

them, they perhaps giving rise to little or no inconvenience. When attacked by inflammation the case will be very different, and the appearance of the parts will be different from those we have described. You will then observe:

The tumors very much swollen, of a reddish hue; the mucous membrane somewhat prolapsed, or rather everted and œdematous, and the parts extremely painful to the touch, and the neighboring organs, such as the uterus and bladder, at fault, through what we term sympathy, and to so great an extent that often these latter organs are regarded as the ones diseased, while the true source of trouble is neglected. How common is this affection, you will soon discover when you commence to practise, if you already are not aware of it. You will examine very few patients who have reached the middle period of life without finding some trace of hæmorrhoids, should you seek for them. Yet in a large portion the affection may be so slight as never to have given any great inconvenience.

Now, what are the causes that will give rise to so frequent a trouble? The list might be made a very numerous one; but it can be condensed into this—anything that will offer an impediment to the venous circulation of the pelvic organs will sooner or later cause hæmorrhoids. Thus you observe it in connection with pregnancy, enlargement of the uterus from any cause, displacements of that organ; affections of the bladder, prostate, or urethra; constipation; the abuse of drastic cathartics, or the irritation of the anus from prolonged riding in the saddle, or the use of improper substances for detergent purposes. A very common cause you will find to be want of proper exercise; hence its frequency in those of sedentary habits, as well as in those whose occupation keeps them standing for many consecutive hours.

The symptoms which announce the presence of external hæmorrhoids are various. It may be only the presence of the tumor which the person detects, or a sense of uneasiness in walking or sitting down; uneasy sensation while defecating; the presence perhaps of a little blood; a sense of weight or bearing down, or perhaps itching about the anus, and this is a symptom which in some patients is most annoying. In some it occurs chiefly after they have retired to bed, while others are often annoyed by it through the day.

In the management of this affection, you will find a great many remedies—so called. In very many of your cases you can relieve, if not entirely cure, your patients, by properly seeking for the exciting cause of the trouble in each individual case, and then subjecting your patient to the proper treatment for that. If it be due, for example, to stricture of the urethra, relieve the stricture and the hæmorrhoids will soon cease from troubling. Do not imagine for an instant that every patient who labors from hæmorrhoids must be subjected to an operation before he can be relieved from his trouble. Not at all; though in very many instances I grant you that nothing short of an operation will offer any promise of permanent relief, and in these instances all the remedies that patients apply of their own accord, and which physicians often advise, tend but too often to perpetuate the trouble.

For the treatment of an ordinary case of external piles, when they are not inflamed, a little care on the part of your patient in avoiding those causes which so frequently give rise to them, viz., constipation, the use of stimulating drinks and highly seasoned food, with frequent ablutions, will often be all that is requisite to relieve unpleasant symptoms; and if it be the first intimation of hæmorrhoidal difficulty, under such a plan of treatment the tumors may altogether disappear.

Under the head of remedies, I should place the free use of cold water, used both externally and as an enema. As an enema I believe you will find it most efficacious when used in the morning, just before the bowels are moved. When constipation is the habit of your patient, you may resort to saline aperients, such as potass bitart., the different preparations of magnesia and sulphur. If you combine several of these remedies in your prescription, and give it in dessert-spoonfuls in a tumbler of water before breakfast, you will often find that they will act very pleasantly. Indeed with some a glass of cold water, taken the first thing upon rising, will often be all-sufficient to cause a regular movement. Avoid all drastic cathartics, and make your patient abstain from all stimulants, either in food or drink. With some the free use of mineral waters, as Kissingen, Vichy, or Pullna, will be found useful. The confections of senna, sulphur, and black pepper, either separately or in combination, are also useful and agreeable remedies to many. A dessert-spoonful of these is usually given in the morning. Few patients will come to you but have made use of local applications, and these, for the most part, will have been astringent ointments, and perhaps the most commonly employed is the gall ointment, with or without the combination of opium. That these are at times serviceable, I do not deny; but that in many instances they are harmful, is equally true. For my part, gentlemen, I am not partial to applying our remedies in this way. It is a dirty mode at the best, and I only resort to it in exceptional cases. Where we have bleeding it may be well to use persulphate of iron in this way, and the strength that is used may be from a scruple to two drachms to the ounce of cerate. So, too, where there is much itching, the red or white precipitate applied around the anus at night may be found serviceable. Where it becomes advisable to resort to topical applications, you may often accomplish your object by the use of lotions, and certainly it will be found both a more cleanly and agreeable method. Among these local applications you will find a solution of tannin, or any mineral astringent, as the sulphate of zinc, either in water or glycerine, serviceable; and you will find equal parts of the liquor plumbi diacet. dil. and the liquor ammonia acet. a useful wash, when acute inflammation is subsiding. When your patient is suffering acutely from inflamed external piles, you may relieve him by the application of a few leeches around the verge of the bowel, by the application of poultices, or in some instances what will be found preferable, the application of ice, and the ice should be placed either in a bladder or bottle. In this way you may use it without keeping the person or bedclothes wet. Opium and belladonna suppositories may also be required to relieve the pain. In these cases you must not neglect to inquire in reference to the bladder, for in many instances this organ may be but partially if at all emptied, your patient's agony being increased by retention, which will require the catheter for its relief. Under this head arises the question, Shall we operate while the piles are in an acute state of inflammation? It is somewhat difficult to give you set rules for your guidance in all these cases, as they will be found to differ materially. The older surgeons unhesitatingly forbid operating upon inflamed piles, fearing that pyæmia would result; while more modern writers rather advocate operating at once. Until you have become more familiar with the disease, and are better prepared to discern different shades of this inflamed condition, I think it would be better, if not safer, for you to abstain from operating till after the acute stage has passed. When, however, you find

a blue tumor projecting beyond the verge of the anus, and this is hard and tender to the touch, and for a day or two has given great annoyance, you may incise this, squeeze out a clot, and then apply a piece of lint dipped in some astringent wash, and you will thus at once relieve your patient.

The subject of itching piles deserves more than the mere references which I made to it a moment ago, for it often is one of the most distressing symptoms to which our attention is called. The remedies that have been suggested for its relief are perhaps as numerous as those for the purpose of "curing piles." I have alluded to the white and red precipitates. Citrine ointment, drachm to the ounce, and the use of sulphurous acid diluted with equal parts of water. This latter is an extremely valuable remedy, especially where we find an eczematous condition of the verge of the anus, which is often due to the presence of a parasitic plant; and for the knowledge of its use I am indebted to Dr. Van Buren. Yet in spite of all these applications I have seen many cases where nothing sufficed short of the removal of the hæmorrhoids by surgical means.

In spite of all your medical treatment and care, you will often find that nothing short of the removal of these hæmorrhoids will suffice. And though you may have carried a patient pleasantly through an attack of inflamed piles, and a long interval elapse without his suffering any inconvenience from hæmorrhoidal tumors, he is almost sure, sooner or later, to have a return of the trouble, and these attacks often will grow more frequent till operative interference is resorted to. You may remove these external growths by various means, such as the ligature, actual cautery and scissors; the various modes of applying these you will see me do upon these patients. My preference here is for the ligature and scissors. If the tumor be a large one, you may pass the curved needle, armed with a double ligature, through the base of the tumor, and then you may tie the base of the tumor on either side; if small, it will be all-sufficient to use a single ligature. On this subject I shall have more to say to you when I come to speak of the treatment of internal piles. Where the tumors are partially surrounded by integuments, be sure to nick this with your scissors and sink your ligature well down into the groove you there make; for if you include integument in your ligature you but cause your patient much unnecessary pain. Those pendulous masses of hypertrophied skin you can best remove with the scissors; the hemorrhage will not amount to much, and should it become necessary to resort to means for its control, the parts are always accessible. Yet see that it has been checked before you leave your patient. In removal of these growths do not be too free with your scissors and encroach upon the verge of the anus, else as a result you may find, after the parts have healed, you have left your patient in a worse condition than before, by giving him a troublesome stricture of the anus. When you operate upon external piles, be sure you examine if the internal form of this trouble does not also exist; for if it does, and you neglect these, your operation will prove of but little avail.

THE Board of Examiners appointed by the Regents of the University of New York, in accordance with the law passed in 1872 for the purpose of examining candidates for the degree of Doctor in Medicine, opened their first session at the Fifth Avenue Hotel.

CASES PRESENTED AT THE CLINIQUE

OF

T. GAILLARD THOMAS, M.D.,

PROFESSOR OF OBSTETRICS AND DISEASES OF WOMEN IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK CITY.

CASE I.—MENORRHAGIA AND METRORRHAGIA.

MRS. K., aged 24. Has been married two years. Has had one miscarriage at the middle of the third month of pregnancy. Her miscarriage occurred nine months ago, and she dates the commencement of her sickness at the date of the occurrence of that accident. It is a noticeable fact that a very large proportion of uterine diseases date their beginning at a parturient process, occurring either at full term or as an abortion.

Symptoms.—The chief annoyance to this patient is a prolongation of her menstrual periods, which are accompanied with great loss of blood, pain in the back and through the body. Consequent upon this is a constant feeling of weakness and prostration; otherwise the patient feels very well.

What is the condition which gives rise to the symptoms for which this woman seeks relief?

Physical Examination.—Position and surface of cervix uteri normal, cervix slightly increased in size.

Conjoined manipulation detects the presence of a round body just behind the symphysis pubis.

This is proved to be the body of the uterus, and not a fibroid growth attached to its anterior surface, by the introduction of the uterine sound. This instrument is found to pass directly into the mass detected by manipulation. The body of the uterus is somewhat enlarged and in an anteflexed position.

The enlargement in this case probably depends upon a prolonged congestion incident to a continued obstruction to the circulation caused by this condition of flexion. The arteries to a considerable degree resist the flexion, and still permit a free flow of blood to the organ; but the veins being less resisting, are more or less overcome by the flexion, and cannot conduct the blood *from* the uterus; hence the organ is kept in a constant state of engorgement. When, therefore, this flow of blood to the uterus is increased by the process of *ovulation*, this regular and constant engorgement is increased, the flow of blood is exaggerated, and menorrhagia is developed.

The increase in size of the organ might be explained in another manner. It might be said to be dependent upon a condition known as sub-involution; but that cannot be satisfactorily proven at this remote period from the abortion. A condition of prolonged congestion is the most reasonable explanation for the increase in size in the present case. The pain which the woman suffers is properly explained in the same manner.

Treatment.—Treatment should consist in placing the organ which has become flexed in such a position as will permit the free flow of blood *to* and *from* it. The condition in which the uterus is found is essentially a mechanical one, and not a condition of chronic inflammation.

Leeches, rest in bed, etc., would undoubtedly give the patient relief; but such measures would be illogically applied, if applied with the view of subduing a chronic inflammatory condition.

First, reduce the dislocation or displacement. This is to be accomplished by introducing the uterine sound into the cavity of the uterus, bending it in such shape as will permit its easy introduction, and then placing the uterus in a straight position by simply elevating the handle of the sound towards the sym-

physis, at the same time making a fulcrum with the other hand at or near the middle of the instrument. When the organ has been placed in a straight position, then the sound may be turned upon its axis and the uterus placed in a position of *complete retroversion*, and there retained for a minute, unless the patient complains of pain.

Next, a firm wad of cotton is to be placed anterior to the cervix. Repeat this operation every five or six days, retaining the uterus in a retroverted position with the sound—at the second sitting, if possible, a much longer time.

Continue this treatment for one month. When the uterus has become accustomed to being thrown backwards, use an anteversion pessary to retain it in its proper position. The use of a stem introduced into the cavity of the uterus is a dangerous method of treatment, because of the liability of its producing not only intense agony, but of producing pelvic peritonitis and death. It should be resorted to only when all other measures have failed. Carefully remove all constrictions about the waist which shall have any tendency to press the abdominal viscera downwards. With proper treatment continued for three months, the prognosis in the case is good.

CASE II.—EPITHELIOMA OF THE CERVIX.

Mrs. B., aged 48 years, married. Three years ago this patient presented herself at the clinic in an emaciated condition, with rapid pulse, face expressive of great distress and anxiety, and a constant metrorrhagia. She could do nothing in the way of labor on account of the great hemorrhage which followed the most trifling exertion or movement of the body.

Physical Examination revealed the existence of cancer of the entire cervix. The cervix was removed by means of the galvanic cautery. The disease appeared in the stump in about one year. In was then destroyed by the use of nitric acid. The patient recovered rapidly, and now presents all the appearances of a woman in perfect health. Now, at the end of three years from her first appearance, there is not a vestige of the disease left. This form of cancerous growth should be regarded as curable, to a certain extent at least, and treated in accordance with that view. Conception, after amputation of the cervix, is rare. I have never seen an instance.

CASE III.—REMOVAL OF HYMEN.

Mrs. R., aged 25 years, married, and has never borne children.

The patient complains that there is some obstruction to sexual intercourse.

Physical Examination.—The hymen is found firm and unyielding, and is in such a condition as necessitates an operation for its removal before the patient can obtain relief.

Diagnosis of a condition of the hymen which obstructs sexual intercourse should be easily made. The proper method of treatment in such cases consists in its complete removal, and not simply splitting it. Seize it with a pair of forceps, and with a pair of scissors completely sweep it from its attachments. If profuse hemorrhage follows this operation, ligate the vessels.

Do not apply a roll of cotton wet in an undiluted solution of persulphate of iron, because a disagreeable accident is quite liable to attend its removal, namely, the removal of all that portion ef the vaginal lining with which it has been in contact.

Complete removal of the hymen is advisable, because it is usually an irritable hymen that gives rise to difficulty in sexual congress, and if permitted to remain, as by the operation of slitting, its irritability not only remains, but is very liable to become increased.

CASE IV.—ENLARGEMENT OF THE ABDOMEN.

This patient, aged 48, and the mother of a family, came to be advised with regard to a supposed ovarian tumor. Her abdomen has been gradually enlarging during the past two years, and has now attained an uncomfortable size.

Physical Examination.—There is apparently an abdominal tumor. Let us see what are the conditions connected with the abdominal walls which may give rise to an apparent abdominal tumor.

Rigidity of the abdominal walls may develop a condition resembling tumor. There is no rigidity present in this case. More, however, will be said with regard to that condition in connection with another case. Œdema of the abdominal walls may cause enlargement.

Pitting upon pressure cannot be developed; nor are there any evidences of dropsy in other parts of the body.

This cause will therefore be set aside.

Elephantiasis will cause enlargement. This affection is exceedingly rare as occurring upon the abdomen, and will not be further considered.

Deposit of adipose tissue is not an infrequent cause of abdominal enlargement.

This deposit takes place between the skin and abdominal muscles; is sometimes supplemented by a like deposit occurring in the omentum, and perhaps in the mesentery. In females this deposit is quite liable to occur about the time of the menopause.

Diagnosis of fatty deposit in the abdominal walls is not always easily made.

In the present case, where there is considerable laxity in the parts, it is very easily arrived at by placing the hands upon the sides of the abdomen, and then, by a kneading, rolling, motion approximating them as near as possible in the median line, when a huge roll of fat is worked up, which can be grasped in the hand, leaving no reasonable doubt regarding its nature. There is no tumor within the abdominal cavity, for the reason that the fingers can be carried lower and lower at the end of each expiration, until they finally touch the posterior walls.

The enlargement of the abdomen is therefore due to deposit of fat, and not to the presence of an ovarian tumor.

Treatment.—Support the abdominal walls, without compressing them. This can be accomplished by a broad abdominal supporter.

CASE V.—ENLARGEMENT OF THE ABDOMEN.

This patient comes seeking advice with regard to the proper time for the operation of ovariotomy for a supposed ovarian tumor. She is an exceedingly nervous woman.

Physical Examination.—Before thinking of the operation of ovariotomy, it is of the utmost importance that correctness in diagnosis should be established beyond question. This has not always been done.

You will notice, gentlemen, that we have here a large conical tumor, causing the abdomen to assume very much the appearance of the abdomen in the advanced stages of utero-gestation. Indeed such a condition as is present in this case has, more than once, been mistaken for utero-gestation, and physicians have not only been called, but have remained in anxious attendance, hourly expecting the delivery of the woman. This tumor can be firmly grasped, and when moved it carries the whole abdomen with it.

What are the causes that may give rise to abdominal tumors?

First. Abnormal conditions connected with the abdominal walls.

Second. Abnormal conditions arising in the peritoneum.

Third. Abnormal states connected with the abdominal organs.

Fourth. Certain conditions that may arise post-peritoneum.

The first class of causes has been somewhat considered in connection with Case IV.; but it is to be brought to our assistance in the examination of the present case. Under that head *rigidity* of the abdominal walls was mentioned as a cause for abdominal tumor. This case is probably as good an illustration of that condition as you will ever see. You will notice that, as I press upon the walls in any direction, there is a rigidity manifested which is boardlike. There is no solid tumor here, for the reason that there is resonance upon percussion over every portion of the abdomen.

The tumor is not due to an accumulation of fluid in the abdominal cavity, rendering the walls tense, for there is absence of the wave of fluctuation, and presence of resonance upon percussion.

You will still further notice how easily the tumor can be outlined, and how it rises into this conical form when I gently irritate the recti muscles. Now, let us percuss the tumor when it is fully developed, and you hear a full and clear tympanitic note. This tympanitic percussion note is due to tympanitis, or accumulation of air in the intestines, and the hardness and rotundity are due to spasm of the abdominal muscles. This spasm is not voluntary upon the part of the patient, but is a peculiar spasm which occurs in hysterical women, and gives rise to what has been termed *phantom tumor*.

The administration of an anæsthetic would dispel the tumor entirely, which would not be the result if it was due to simple accumulation of air in the intestines without muscular spasm.

Both cases just shown you illustrate the importance of thorough and exhaustive examination before venturing upon a diagnosis.

CASE VI.—SUB-INVOLUTION OF UTERUS AND VAGINA.

Mrs. F., æt. 30, and the mother of two children. The youngest child born eight years ago. Sterility has existed since that date.

Has been sick during the last three years. Her chief complaint has been of burning pain upon both sides in the hypogastric region and extending down the thighs. Menstruates every two or three weeks. No leucorrhœa. Pain in the bladder. Backache. The backache is a greater source of discomfort than any other single symptom. Loses considerable blood at each menstrual period.

Physical Examination.—The drawing upon the blackboard will represent the condition when the patient is placed in the erect posture.

Ostium vaginæ open. Cervix farther back than it should be. As the finger passes along the anterior wall of the vagina the body of the uterus can be distinctly recognized in a position of anteflexion. Cervix is slit up to the vaginal junction upon both sides. The walls of the cervical canal, however, lie in close contact. It very frequently happens that, when the cervix becomes ruptured in this manner, the lips of the womb become everted, and rub against the vaginal walls, giving rise to excessive irritation. The vagina is very voluminous. The perinæum is ruptured. The conditions present in this case are not at all infrequent.

They are four in number. (1.) Ruptured perinæum. (2.) Sub-involution of the vagina. (3.) Rupture of cervix uteri. (4.) Sub-involution of uterus, with displacement.

The body of the uterus is very much enlarged. It is in a condition of sub-involution, which has been present during the past eight years. It is displaced for the reason that its weight is very much increased, and it has lost its normal support on account of the ruptured perinæum, which takes away the support of posterior wall of the vagina, the anterior wall, and the bladder.

The cervix was torn through at her last delivery, which arrested the subsequent normal process of involution of the entire organ.

The ruptured perinæum and torn cervix uteri have been followed by sub-involution of uterus and vagina.

Treatment.—There are three indications to be met in the way of treatment:

(1.) Restoration of the uterus to its normal size.

(2.) Restoration of the vagina to its normal size.

(3.) Supporting the bladder.

For the first the systematic use of ergot should be adopted, and continued perhaps for two years. The systematic and long-continued use of ergot undoubtedly has the power of diminishing uterine engorgement by diminishing the volume of uterine fibre. Fld. ext. ergot ʒ ss. twice daily. Employ an anteflexion pessary to lift the uterus from the bladder. Continue this treatment for some time, and when an improved condition of the uterus has been established, replace the perinæum by surgical means, and give more permanent support to the bladder, which will fulfil the third indication.

It must not be expected that we can give perfect support, such as was present when the parts were in a normal condition, but much better support may be furnished than now exists.

Her condition may be improved so that perhaps pregnancy may again occur. The process of utero-gestation, and the subsequent process of absorption, may give the patient yet additional benefit, by giving the uterus and vagina a second opportunity to undergo involution.

Closing the torn cervix is not recommended, because no harm attends its existence in this particular case, but in most it is decidedly advisable.

CASE VII.—SUB-INVOLUTION OF THE UTERUS.

Mrs. Q., æt. 24, been married three years, and is the mother of one child. The child was born two years ago. Has never been well since the birth of her child; a very common history.

Menstruates entirely too freely. Has constant fixed pain in the back, and dragging sensation about the pelvis. Exercise causes excessive fatigue. Has leucorrhœa. These are symptoms from which she wishes to be relieved.

Physical Examination.—Uterus lies upon the floor of the pelvis, and can be touched at the distance of a single phalanx from the external opening of the vulvæ. Cervix is very large, and the body of the uterus measures nearly an inch more than it should.

There is an ichorous irritating discharge from the external os. The ovaries are slightly enlarged and somewhat tender. The perinæum is ruptured. Such are the results of physical examination.

What is the diagnosis? The uterus is enlarged and in a condition of chronic engorgement. Some would call it chronic inflammation of the parenchyma of the organ.

The uterus is upon the floor of the pelvis. Many would regard it as a case of displacement.

There is some enlargement and tenderness of the ovaries present. Some would pronounce it a case of enlarged and tender ovaries, and that the condition of the uterus was secondary to ovarian affection.

For my own part, I believe the case can be most satisfactorily explained upon the ground that it is one of sub-involution; and further, that it is a typical illustration of a large class of cases which are often regarded as chronic inflammation, displacement, etc., etc. Her sickness dates from her last parturient process. During that process, or subsequent to it, it is probable that conditions were developed which interfered with the proper completion of the process of involution. Consequent upon this the organ has remained of more than normal weight. This increase in weight, together with loss of support sustained by rupture of the perinæum, has caused the displacement.

The constant tension produced upon the ligaments of the uterus, arising from the displacement, causes the constant pain in the back and dragging about the pelvis.

The increased size and constant congestion of the organ, particularly the lining membrane, accounts for the too free menstruation.

Treatment.—Place the patient in bed, where she will remain for two weeks at least. Replace the organ as perfectly as possible with the hand. Keep the bowels quite open. Use warm vaginal injections three times a day, for twenty minutes at each time. Continue this treatment two or three days. Then, after pushing the uterus up as high as possible, tampon the vagina with cotton soaked in glycerine, and permit the tampon to remain for 36 hours. Remove and replace the tampon at the end of that time, and continue that treatment for ten days. It is quite probable that at the end of that time she may be able to wear a uterine support. If so, fit one accordingly, and place the patient upon the use of ergot in half-drachm doses of the fld. ext. twice a day, which is to be continued, it may be, for a long time. Remove all pressure upon the organ from above. This can be accomplished by wearing an abdominal supporter or a belt. Sustain the general condition of the patient with iron and bitter tonics. There is one other condition which demands attention, and that is the fungoid condition, or little warty growths, so called, upon the inner surface of the uterus, which are almost invariably present in this class of cases. These are to be removed by gently scraping the internal surface of the uterus with the curette. When these bodies are all removed, carry the co. tr. iodine up to the fundus of the uterus, and pass it over the entire internal surface.

This condition of the internal uterine surface is a prolific cause of menorrhagia, and by its cure the woman will be relieved of both the menorrhagia and leucorrhœa, which are present in her case.

When the uterus has been materially reduced in size, and the general condition of the patient improved, the perinæum may be replaced.

"A NEW PLEASURE."—Under this caption *The British Med. Jour.* quotes the following from *The Times:* "Should this meet the eye of the lady who got into the 12.30 train at New Cross Station, on Friday, May 15th, with two boys, one of whom was evidently just recovering from an illness, she may be pleased to learn that three of the four young ladies who were in the carriage are very ill with the measles, and the health of the fourth is far from what her relations could desire."

Original Communications.

THE NASAL DOUCHE: WHAT IT ACCOMPLISHES AND WHAT IT DOES NOT.

BY BEVERLEY ROBINSON, M.D.,

SURGEON TO THE MANHATTAN EYE AND EAR HOSPITAL (DEPARTMENT OF THE THROAT); PHYSICIAN TO THE DEMILT DISPENSARY, ETC.

Read before the New York Medical Library and Journal Association.

SINCE Roosa, Moos, Knapp. Pardee, and other well-known specialists have made known to the profession the evil effects upon the organ of hearing which may and do result from the use of Weber's douche, in applying medicated solutions to the mucous lining of the nasal passages, its employment has become more restricted.

A few practitioners, it is true, have persistently denied that unfortunate sequelæ are ever directly caused by this convenient appliance. Others, more numerous, admit that inflammation of the middle ear, followed by purulent discharge, may infrequently be occasioned by the douche; but they add that, when *properly* used, viz., when the patient does not swallow during the period which the operation consumes; when due attention is paid to the temperature and degree of concentration of the solution employed, to the force of the jet of liquid and the duration and frequency of the application, objection to its use are rarely, if ever, valid.

Others, again, in their writings, bid their colleagues to beware of employing the nasal douche, no matter how imperative the indication of its use may appear to be, and consider its adoption, as a method of treatment, to be ever attended with danger to the ears of the patient. Amongst these latter Professor Roosa stands forth prominently; and as he is of the opinion (Treatise on Diseases of the Ear, p. 291) "that its use should be discountenanced by the profession," no doubt, when his work appeared, many of those physicians who still remained faithful to the douche, abandoned it, though loath to do so, "as it is thought to be so thorough in its work of cleansing the nostrils and pharynx." (Loc. cit.)

Against this received opinion, which we deem to be a great though generally accepted error, we here desire to enter our protest.

The nasal douche *does not*, in our estimation, do what it purports to do, viz., cleanse thoroughly the nasal passages and naso-pharyngeal cavity, but in reality leaves a considerable space untouched by its action. If such be the case, those members of the profession who gave up its use with reluctance need at present have no regrets.

We will now endeavor to demonstrate the truth of the above assertion. The diameter in all directions of the jet of liquid which flows from the nozzle of the ordinary Weber's douche is certainly not more than $\frac{1}{4}$ to $\frac{1}{3}$ of an inch. The anterior openings of the cartilaginous portion of the nose (nostrils) in the adult, and during normal respiration, are of oval form, and, speaking generally, from $\frac{1}{3}$ to $\frac{1}{4}$ of an inch in the lateral, and from $\frac{1}{3}$ to $\frac{1}{2}$ in the antero-posterior diameter. The posterior openings are likewise somewhat oval in configuration, and about half an inch in the short, or transversal, and 1 inch in the long, or vertical diameter. The depth of the nasal passages at their median portion is nearly double this latter measurement; whereas the lateral diameter in this region measures,

upon the floor of the fossa, or inferiorly, only 6 lines, and becomes rapidly narrower as we approach nearer to the roof, or superior part of the nose, where it has only about 1 line.

This lateral diameter does not vary much antero-posteriorly, but remains nearly the same on a given horizontal plane. These data being accepted as true, let us see how the douche acts. When the nozzle is introduced into one of the anterior openings of the nose, and the stream begins to flow, but a few seconds usually elapse before a jet of water of like calibre with the entering one makes its exit from the opposite nostril. Now, the physiological fact upon which the use of Weber's douche is based is, that one side of the nasal and the entire naso-pharyngeal cavity being filled with liquid by hydrostatic pressure, the soft palate is raised up by the contraction of the levatores palati muscles, and perfect coaptation between its posterior border and the walls of the pharynx is effected, and thus the passage-way for the escape of any quantity of liquid downwards into the pharynx is completely intercepted. The injected liquid must, therefore, of necessity, make its exit by the other side of the nasal passages, and in doing so comes in contact with all the parts contained in or limiting *the side* of these cavities through which the stream *enters*.

To this we reply that if, during the operation, one-half the nasal passages and the entire naso-pharyngeal space were flooded with liquid, we doubt not that the whole of the interior of these cavities would be cleansed and rinsed very completely. But, practically, is this often or ever the case?

We put aside temporarily, without considering them, those cases in which the passages are so much obstructed by the swollen and infiltrated condition of the mucous membrane, or from some other cause, that the stream either *cannot* pass, or flows slowly and imperfectly; and we would draw attention to the following propositions:—

1. Inasmuch as in the majority of cases the column of water escapes in equal volume, and with as great force and rapidity as the entering jet, how can the passages be flooded?

2. Water naturally seeks its level, and when it can pass freely around the posterior border of the nasal septum, how can it be made evident that it goes so far upwards as the vault of the pharynx, or penetrates to the depth of the nasal cavities?

3. We must remember that, in using the douche, the patient is told to bend his head over a basin or receptacle for containing the issuing liquid. The floor of the nasal passages thus becomes a plane inclined forwards and downwards, and the medicated solution employed has, by the mere force of gravity, an impelling tendency to go around the septum narium and flow out by the lower meatus.

We may now return to the cases where the passages are greatly obstructed; and, first, we question whether —and though the calibre of the stream be sufficient to fill up one of the anterior openings of the nares, and be used under the conditions of hydrostatic pressure ordinarily employed with the douche—whether, we say, in like case the remaining portion of the side of the nasal cavities by which the stream of liquid flows in would be entirely filled. When we penetrate a short distance into these cavities their dimensions are greater in the different diameters than those of the anterior nares, and with similar calibre of orifice of exit to orifice of entrance, both being placed on the same level, the liquid must take the shortest and most direct road towards the opening of escape outwards.

If, however, the force and rapidity of the current be very great, and if, owing to excess of obstruction on the opposite side to that of the entering fluid, this latter cannot so quickly leave the nasal passages as it flows into them, one side, at least, of these cavities may be entirely filled with liquid; but even in that case it would only be during a few seconds.

For, admitting the possibility of the case supposed, is it not apparent that the subjective sensations of the patient would become so unpleasant, or the pressure in the nasal cavities and naso-pharyngeal space be such that the soft palate would give way almost immediately.

Some liquid would then pass into the stomach by an effort of deglutition, or else, owing to confused breathing, get into the larynx and produce a violent paroxysm of cough. In the last-mentioned event the whole of the inflowing liquid would be violently rejected through the mouth and nose, whilst the operation itself would of necessity be suddenly interrupted.

We do not believe, therefore, for our part, that either the vault of the pharynx, the superior and middle turbinated bones, or the superior meatus, are cleansed *at all* by the nasal douche. True it is that a great deal of inspissated mucus, hard crusts, and soft, fetid secretions, are frequently brought away; and we were disposed, for a long while, to console ourselves in the belief that the nasal cavities were effectually rinsed at the termination of each operation. Experience, however, has taught us the fallacy of such a belief; and now that we inspect the nares anteriorly after one of these washings, and, what is still better, make a rhinoscopic examination posteriorly, when it is possible, we find at times there still remains at the top of the pharynx, or around and contained in the posterior openings of the nose, strings of viscid mucus which have been left untouched. Whenever this proof is wanting we shall have to consider the striking clinical fact of a crust or large muscle-shaped bit of mucus being expelled from the nose after what we inferred wrongly had been a most complete cleansing.

The explanation of this phenomenon is readily found. Large pieces of mucus have become detached from the roof of the nose, and more particularly from the cribriform plate of the ethmoid bone, the posterior surface of the nasal bones, and the upper turbinated bones, owing, no doubt, to increased temporary secretion, brought on by the use of the douche, and have fallen to the floor of the nasal cavities. Here they have been the occasion of more or less unpleasant and abnormal sensations, and a strong effort of expiration is sufficient to expel or throw them off altogether. Whilst much of the irritating and concrete mucus is thus got rid of, a certain amount remains behind, and, by the morbid alterations which it assumes, is the source of further disease, or, at all events, by its constant contact with parts already diseased, protracts or renders impossible the return of these latter to their normal state.

We would not have our readers believe that the foregoing remarks originated *wholly* with ourselves. They have been suggested partly by the perusal of an interesting communication from the pen of Thomas F. Rumbold, M.D., which appeared in the number for September, 1873, of the *St. Louis Medical and Surgical Journal*, partly by a short article in Archiv für Ohrenheilkunde (vi. Bd., 4 Heft, 1873), by Ludwig Schultze, of Leipzig, and partly, we feel free to add, by our own individual thought and experience. The subject of these brief remarks is assuredly one worthy of attention.

Affections of the nose are not infrequent with us. Nasal catarrh especially is met with each day and on all sides.

It becomes, therefore, the duty of every practitioner of medicine, and not merely of the specialist in diseases of the throat and nose, to know how this last-mentioned and other analogous affections may be treated prudently and efficaciously; and true it is, unfortunately, the treatment of them has hitherto been most unsatisfactory. So much is this the rule, in point of fact, that already, amongst unprofessional persons, "catarrh" is classed with other "opprobria medicorum."

May not the secret of this lack of successful therapeutics be found in the statement, we ask, that thus far no instrument has come into *general* use which meets the one evidently essential indication in the treatment of every case, viz., to thoroughly cleanse the *entire* nasal cavities.

15 WEST 26TH STREET.

Reports of Hospitals.

BELLEVUE HOSPITAL.

NOTES OF PRACTICE AND PECULIARITIES IN TREATMENT.

THIRD MEDICAL DIVISION.—DR. PERRY, HOUSE-PHYSICIAN.

ELECTRICITY IN VOMITING.

THIS means of controlling obstinate vomiting had succeeded admirably in all the cases which had presented themselves since its first adoption in this branch of the service. For arresting the vomiting which attended some cases of puerperal fever, it had operated in a manner perfectly satisfactory. The method of using the remedy is to place the positive pole over the seventh cervical vertebra, and the negative pole over the stomach. The strength of the current is varied according to the susceptibilities of the patient.

DIGITALIC STUPES

was used in a case of chronic Bright's disease. As long as urine was secreted freely, the woman felt very well, and did not lose ground. Infusion of digitalis, used in the form of stupes, accomplished all that was desired in the way of keeping up a free flow of urine. She had been using the remedy in this manner for some time with the same result.

PNEUMONIA.

The special feature of interest in a case noticed was the extent of the consolidation, and the paucity of rational symptoms. Dyspnœa was absent. There was but very little increased frequency of respiration. Pulse somewhat increased in frequency, but not markedly so. Temperature only *slightly elevated. There was complete consolidation of one lung and the lower lobe of the opposite lung.* After a few days' duration of this condition, dyspnœa, hurried respiration, and other symptoms of constitutional disturbance became quite well developed. Recovery took place.

PILL FOR CONSTIPATION.

The following pill is found to be quite serviceable in correcting constipation.

℞. Aloes soc. pulv..... grs. vi.
Ext. belladonna..... grs. iij.
Confection sennæ..... q. s.
M.
Div. in pill No. xii.
S. One morning and night.

CHRONIC CYSTITIS.

Silicate of soda one part to two hundred of water has been employed upon this Division for washing out the bladder in cases of chronic cystitis. The results obtained have been somewhat more satisfactory than those attending the use of solutions ordinarily employed in the treatment of this affection.

OAKUM FOR DRAINAGE.

The requirement, after operation for exsection of hip-joint, is to secure free discharge from the bottom of the wound. Under such circumstances the opening should never be plugged with cotton. It is *necessary* to use some substance which will permit free discharge, and, at the same time, help to absorb it. Oakum meets these indications better than any other substance that can be employed. If cotton is used, immense damage may be done by infiltration of the discharges into the tissues surrounding the wound. Such is the doctrine taught in this hospital. Another item which is regarded as being of special importance in dressing the class of cases just alluded to, after the operation, is to maintain *firm compression* about the wound, in order to give additional security against infiltration of the tissues with the discharge. Oakum again serves the surgeon most admirably. Cover the surface of the limb about the wound with a thick layer of oakum, and compression can be made to any degree required by means of a roller bandage without endangering in the least the life of the tissues beneath it.

DEFORMITY AFTER FRACTURE.

Deformity after fracture is very apt to occur, more especially in the lower extremities, if the soft callous thrown out for the repair of a fracture is not properly protected for some time after union has taken place. If supporting apparatus is not used when the patient commences to walk around, the soft material will commence to yield, and not infrequently ugly deformities will be developed, much to the annoyance of both patient and physician.

RE-FRACTURE.

Breaking up a fracture which has united with deformity should hardly be undertaken when the union is older than four months.

Apply very powerful extension while making the movements necessary to break up the adhesions. The counter-extension band should be very carefully padded before making such powerful extension, for, the patient being under the influence of an anæsthetic, the surgeon has no knowledge of the amount of pressure upon the parts except by the effects produced upon the tissues. Break the bone thoroughly, but, at the same time, with great care. Break the adhesions thoroughly, both upon the inside and outside of the bone.

FRACTURE OF RADIUS AND ULNA IN A CHILD TWO YEARS OLD.

The fracture was dressed with the arm in the extended position, and held by a long splint made of binders' board, wet, completely moulded, thoroughly padded, and reaching from near the axilla to the palm of the hand. This manner of dressing was employed, because of the difficulty which arises in splinting the forearm of a child of this age, on account of the shortness.

NEURITIS.

The patient was an able-bodied man. He had received a blow upon the deltoid muscle about seven weeks before, and had felt an uneasy pain extending down the arm ever since the accident. The case was

regarded by the visiting surgeon as one of *neuritis*, probably due to injury of the circumflex nerve at the time he received the blow. The difficulty had already affected other nerves. It was painful and troublesome. Time is a great element in the treatment. Counter-irritation was said to be useless. Friction and stimulating liniment was about all that could be reasonably done for such cases.

HOSPITAL FOR THE RUPTURED AND CRIPPLED.

THE special object of this hospital is the cure of those cases which, for obvious reasons, do not come within the ordinary medical and surgical treatment of public hospitals in general.

To the resident physician and surgeon and his assistant we are indebted for the following items with regard to treatment of the affections named.

CLUB-FOOT.

These cases are uniformly treated by applying a shoe constructed in accordance with the following general plan: The sole of the shoe is made of sheet-iron. A heel-cap about an inch and a half high is attached. A strap of iron half an inch wide, more or less, is attached to the edge of the sole opposite the heel, having a lateral joint opposite the tibio-tarsal articulation, and at its upper extremity a padded band to go around the leg just above the calf. The heel of the foot is made fast within the heel-cap by a pad, having pieces of tape attached, which is applied to the instep; passing the pieces of tape through the heel of the shoe and bringing them back, they are tied over the instep. A roller bandage is passed around the ball of the foot, and thence around the sole of the shoe in such a direction that the foot is drawn into its proper position and retained upon the sole of the shoe. The whole apparatus is covered with leather, and is to be applied over a stocking. It is changed twice a day for the purpose of giving both motion and relief to the foot. It is worn at night. It is customary to apply some lint and a roller bandage over the foot, where pressure previously has made the skin tender or even excoriated, before applying the stocking and shoe.

When the talipes is equinus, the motion of the joint is limited to motion *forward* from a perpendicular. When the talipes is calcaneus, motion is limited to *backward* movements from a perpendicular. The idea is to leave motion free in the direction which will permit any step the patient takes to assist in overcoming the deformity, by having a tendency to bring the toes down and the heel up in calcaneus, and the heel down and the toes up in equinus.

It is not believed that a majority of cases can be cured by any apparatus *alone*, however early the treatment may be instituted. Tenotomy therefore is necessary. The success of treatment by means of the shoe is to determine whether the cutting operation is to be performed.

It is the faithfulness and persistency with which the treatment is carried into effect, either before or after the operation, that is to remove the deformity. The plan of determining whether a contracted part is to be cut or not, by applying the test of placing the contracted tissue upon the stretch, and then making an additional point of pressure to determine whether reflex contractions can be produced or not, and if present cut is regarded with some favor.

HIP-JOINT DISEASE.

The operation of exsection is condemned. Hygiene and constitutional treatment are chiefly relied upon. The local treatment is regarded as quite important, and consists in the application of a *spica* bandage to the hip, thus giving some rest and support to the parts involved, and then let the child run about all it may choose consistent with prudence. A moderate counter-irritation is maintained, such as can be secured by the following liniment:

℞. Lin. saponis.....ʒ vi.
Liq. iodini co.....ʒ i.
Fl. ext. belladonnæ.....ʒ ss.
M.

The diet of the patients within the institution is especially regulated; the meals are given with regularity four times a day. The food is of the most nutritious quality, and that which can be easily digested. Medicinally, the treatment is alterative and tonic.

POTT'S DISEASE.

A case which we saw was one in which there was a double angular curvature, one in the dorsal region and the other in the lumbar region. In addition to these, and doubtless dependent upon the disease of the spine, was a large, doughy swelling upon the outer anterior aspect of the left thigh.

It has been found that when these swellings contain more or less of *serum*, pressure and tr. iodine will sometimes remove them entirely. Fluid, probably purulent, may be present, but they are not opened.

CHRONIC SYNOVITIS.

This affection is treated chiefly by means of pressure, tr. iodine, and the iodine liniment already mentioned.

Pressure, in all cases in which it is necessary, is made by means of a *lacing* apparatus. A stocking, or knee-cap or leggin, large enough to nearly encircle the limb, is made of strong cloth, and lined with buckskin. The lining is only loosely attached to the outside, which permits of the introduction of cotton over various points, if desirable to make circumscribed pressure, or give an extra protection to the tissues. Eyelets are introduced along the edges, and a lacing cord can bring to bear any degree of pressure required. It forms a very convenient and serviceable method of applying pressure.

PARAPLEGIA WITH POTT'S DISEASE.

This is a condition occasionally met with, and it is of some interest to know that, with treatment of the spinal trouble, the paraplegia is usually cured, or is removed in from six to ten months.

Some cases in this institution have recovered from the paraplegia, which has been in existence for *five* years.

WATER.

During the hot weather the quantity of water given to the children is limited. It has been found that, if they are permitted to drink all their thirst craves, it is done at the expense of disturbing digestion and exciting bowel complaints. A reasonable quantity of fluids is allowed at stated times, and only at such times as designated. The desire for immoderate drinking is soon overcome in this manner, and a better degree of health is maintained than to permit an unlimited drinking of water.

Progress of Medical Science.

ON VALERIANATE OF AMYL AND ON AMYL ETHERS. — Dr. W. F. Wade writes to the *British Med. Jour.* concerning the value of new preparations of valerian, viz., valerianic ether, valerianate of amyl, and amyl ethers: "Notwithstanding that valerianic ether is less disagreeable to patients, as testified by those who have taken both, than the ordinary valerianic preparations, it has its drawbacks, the principal one being the diffusion of the smell through the apartment or ward when a dose is being taken, or through the shop when it is being dispensed.

"It occurred to me that possibly the valerianates of amyl might be more elegant than the ethyl preparations. . . . The methyl one is not much superior to its predecessor, but the amyl one is incomparably more agreeable. A spirit of the valerianate of amyl, to which a few drops of a spirit of acetate of amyl (known in commerce as essence of Jargonelle pear), have been added, is, without any qualification or exception, not only the most elegant preparation of valerianic acid, but intrinsically an agreeable drug. All these spirits improve in odor by a little keeping. I find that, to some stomachs, ethers are repugnant, unless well diluted; and six or eight drops of the compound spirit are, generally speaking, sufficient for an ounce of water, and also an adequate dose. I think that the effects of the amyl valerian are quite as good as the ethyl preparation. This latter will be called, in future, valerianate of ethyl, instead of valerianic ether. The new preparation will be called compound spirit of valerianate of amyl (sp. amyl valer. co.), and will consist of one part of ether to nineteen of spirit. To two ounces of this are added twenty minims of a spirit of acetate of amyl, made in like proportion, viz., one in twenty. The simple spirit will also be procurable.

"I take this opportunity of saying that, by my direction, the oxide of amyl or amylic ether has been prepared. This is a more agreeable preparation than the ordinary (ethyl) ether preparation of the *Pharmacopœia*. I have not yet had time to try its therapeutical effects, but should this equal those of the valuable old drug, it will probably be superseded. A spirit of amylic ether, to an ounce of which one drop of oil of gaultheria has been added, is a singularly fragrant and agreeable drug. Spirit of amyl, with a little acetate of amyl, is also very elegant."

TREATMENT OF VARICES BY LOCAL APPLICATION OF PERCHLORIDE OF IRON.—Dr. Linon, of Verviers, has used perchloride of iron locally, with great success, during the past three years, in the treatment of varices. The strength of the solution is about two and a half drachms to eight ounces of water. Compresses of flannel are steeped in the water, then wrung out, and applied by means of a flannel bandage, which is only to be moderately tightened. This application is to be kept on twenty-four hours, and on removing it the surgeon will be much surprised to find that the venous dilatations have almost entirely disappeared. The applications are to be renewed as above during seven or eight days successively, after which time the bandage is to be kept on without any further wetting, till it becomes loose. It is to be then wetted with the solution again, and applied until the varices have disappeared, which generally takes place after eight days or a fortnight, according to the size of the swelling. These simple means have removed in a few days enormous varices, accompanied by violent pain, with dark spots on the surface, and have restored to the patients the use of their limbs. By the unsuccessful application of dry bandages only, Dr. Linon has been able to show that it is not compression, but really the local action of the iron, which is efficacious. The local action of thermal waters containing magnesia, on the skin, is similar to the perchloride. Thus at Luxeuil, patients affected with varices derive great benefit from the Benedictine pond.—*The Lancet.*

ANTIDOTE OF RABIES.—Dr. Jitzki communicated, in January, 1874, to the Imperial Society of Wilna (Russia), a fact of some interest. A very savage dog was in the habit of killing vipers (Coluber berus), and his mouth and neck were covered by the wounds inflicted by them. This animal was bitten by a mad dog, which had already bitten several horned cattle and another dog; these all perished from rabies. The owner of the first-mentioned dog, not wishing to destroy him, determined, however, to watch him, and made up his mind to kill the animal on the appearance of the first symptoms of rabies. Nothing, however, happened, and the dog remained quite well.

The case struck Dr. Jitzki, especially as he learned that a woman of the same locality had been bitten by a viper, and some time afterwards by a mad dog, without suffering from hydrophobia. He was thus led to suspect that there is antagonism between the virus of hydrophobia and the virus of vipers. If this were true young dogs might be protected by inoculation.—*The Lancet.*

NATURE OF THE FLUID DISCHARGES IN CORYZA.—At a recent meeting of the Société de Biologie, M. Ranvier stated that, on examining with the microscope the fluid discharged from the nose at the commencement of coryza, he found that it contained a large quantity of cellular elements; some of cylindro-conical form, with a flat surface crowned with cilia; others strongly granular and turgid, in which the flattened surface and cilia had disappeared. Rindfleish was of opinion that these cells were colorless corpuscles, covered with cilia. It was of great importance to determine if these were really leucocytes, or only deformed epithelial elements. On warming them some of the cilia could be seen to recommence their movements, but no amœboid motions were observed. They are, therefore, not colorless corpuscles of the blood. M. Ranvier has become still more satisfied of this after examining them in iodized serum. The use of the amniotic liquid of the sheep, highly iodized, enabled him to recognize the fact, in conformity with the statements of M. Bernard, that the colorless corpuscles of the blood, or the lymph corpuscles, contain considerable quantities of glycogen. In fact, when leucocytes are immersed in iodized serum, they may be seen to acquire a characteristic violet-brown color. But the cells with vibratile cilia met with in the mucous of coryza, though assuming, indeed, a yellowish tint under the influence of iodized serum, do not give the peculiar reaction of glycogen. It would hence appear to be clearly made out that these are not young elements proceeding from the blood, but that they are the epithelial cells of the mucous membrane.

A NEW OPERATION FOR CLEFT PALATE.—In a recent number of THE RECORD we noticed a modification of an operation for fissure of the bony palate, performed by Sir Wm. Fergusson (and described in *The Lancet*, vol. ii. p. 784), after the failure of the ordinary operation of Langenbeck. *The Lancet* of June 20, 1874, contains a description of still another improvement by the same surgeon. The operation, as

before described, consists in paring the edges of the mucous membrane on each side of the cleft, and then, by means of a chisel, splitting the hard palate on each side, and forcing the two portions of bone thus obtained towards the middle line. The osseous fragments are then bound together in the middle line by two or three silk ligatures, each of which passes through the nasal cavity. The results of all the cases operated upon up to that date were reported at page 298 of the current volume. Although the operation has hitherto been remarkably successful, considering the severity of some of the cases in which it has been employed, it had one drawback. The two bony fragments were liable to become tilted. To obviate this Sir William recently followed this course:—After paring the edges of the mucous membrane, he pierced the hard palate with an ordinary shoemaker's awl in two places on each side of the cleft, close to the margin, in such a manner that the holes on one side of the fissure were directly opposite those on the other side. A separate silk suture was then passed through each hole on one side, carried into the nasal cavity, and brought into the mouth again through the holes on the opposite side of the cleft. When the sutures were thus secured, the hard palate was divided on each side outside the apertures, by means of the chisel, in the manner described. The silk sutures were then drawn together, and the two fragments of bone brought into gentle apposition. Sir William remarks that since first performing this operation he has found that it had been previously recommended by Dieffenbach.

Epilepsy Induced by Heavy Potations.—The same authority says: "Epilepsy and epileptiform seizures are induced in many instances in recruits by indulging in heavy potations; indeed, among soldiers generally, the inordinate use of alcoholic drinks is a potent cause. The gorging of the stomach, usually with beer, was found by Dr. Balfour (Aitken's Science and Practice of Medicine, vol. ii. p. 356) to bring about attacks; and the same is my experience. Indeed I have known instances of soldiers who never had attacks except after filling their stomachs with intoxicating drinks, more especially the vile potations used as substitutes for spirits in foreign countries. No doubt many cases of so-called sunstroke in India are induced by these poisonous liquors which in bygone years caused such maddening effects that men were known to mutilate themselves when under their influence."

Influence of Alcohol and Tobacco on the Heart.—Nowhere can thoracic sounds be better studied than at a large recruiting depot. . . . . It is indeed curious as well as interesting and instructive, to note the vagaries in cardiac sounds alone. These, although in no ways so varied as the causes to which they owe their existence, are sufficiently conflicting. Thus, frequently, between exciting and depressing influences of one kind or another, it is very difficult to say how far abnormalities are ascribable to temporary and to organic derangements. Under such circumstances, cases often occur apart altogether from the morbid sounds when the heart's rhythm is perverted. I can give no better definition than a muffling of the two sounds, or what might ordinarily be called "a variety of irritable heart," occurring, however, occasionally in subjects not naturally of an excitable temperament. From these persons it was very often readily elicited that they were given to an excessive use of tobacco, either by smoking or chewing, or the two combined, accompanied, in many instances, by drunken habits. The amount of tobacco consumed daily, was ordinarily half an ounce, and often nearly a whole ounce. From constantly observing cases of this description, and invariably associating them with the above causes, I desired several recruits to abstain entirely from tobacco and alcoholic drinks for a week, and return for inspection. In three or four instances out of ten all the symptoms disappeared; whilst in the cases where there was little or no improvement it was more than probable that the injunctions were not carried out properly. I do not know if this want of clearness in the systolic and diastolic sounds is to be detected in every instance of the excessive use of tobacco or of alcoholic drinks; but judging of the prevalence of the state in question among Londoners (chiefly in-door workmen and persons leading sedentary lives) it would seem to be pretty general.—A. Leith Adams, M.B., F.R.S., Surgeon Major, London Recruiting District, in *The Lancet*.

An Unnatural Position of the Head a Cause of Death from Anæsthetics.—An interesting paper by Dr. G. W. Copeland appeared some time ago (Feb. 26, 1874), in the *Boston Medical and Surgical Journal*, on the "*Styloid Muscles and Anæsthetics.*" In this article the cause of impeded breathing during anæsthesia was attributed to the action of the styloid muscles closing the glottis. It was also there shown that the difficulty could always be relieved by simply tilting the head forward so as to relax these muscles, without making traction on the tongue. In a further contribution by the same writer to the *Philadelphia Medical Times* of May 30, it is claimed that death from chloroform and other anæsthetics is often caused by an unnatural position of the head, the latter being thrown back and the styloid muscles put upon the stretch. Circumstances in a number of recorded cases of death from anæsthetics are cited which favor this opinion. It is asserted "that all the deaths from nitrous oxide gas, and a large number of those from other anæsthetics, have taken place while the patients were in a sitting posture, which would allow the head to fall back farther than if they were lying down; thus favoring the theory that interference with the free action of the lungs may have been the primary cause of death." The cardiac syncope would be of course more readily induced "in patients suffering from shock or fatty degeneration, or already reduced by disease."

Another point advanced is "the importance of elevating the head sufficiently to compel the patient to inhale the anæsthetic through the nares entirely. If deep inspirations be taken through the open mouth, the lungs are inflated instantaneously, and just as rapidly emptied, leaving a long interval while no vapor is in the lungs. If the inhalations be through the nares, it takes a much longer time to inflate the lungs, and a much longer time to empty them, leaving no interval. Now the number of respirations per minute is the same either way; hence it follows that it will require a longer time to effect anæsthesia through the mouth than through the nose."

Transfusion from the Lower Animals to Man.—In the *Medical Examiner* of June 15, 1874, Dr. Gradle reports two instances of successful transfusion from lambs to patients affected with phthisis. The cases were in the practice of Dr. Proegler, of Addison, Illinois. The success of Hasse, of Nordhausen, in Germany, in treating phthisis by transfusion from lambs, induced Dr. Proegler to repeat the experiment, and his cases are the first instances of the performance of this operation in this country. The record of the cases furnished us serves only to demonstrate the prac-

ticability of the operation; sufficient time had not elapsed when the report was made to give any positive therapeutical results of the procedure.

Canulæ were inserted into the carotid of the animal and the median basilic vein of the patient, and connected by a rubber hose. Before the connection was completed, the blood current was made to displace a weak, warm solution of carbonate of soda, with which the apparatus was filled. In the first case operated on, the stream of lamb's blood having been permitted to flow into the patient's circulation for ninety seconds (representing about eight ounces of fluid), the effect is thus described: "Immediately a sense of warmth spread from the incision over the patient's entire surface; the face became flushed; the pulse *slackened*, but full and firm; a slight *fulness* in the head increased to excessive vertigo; singing in the ears was heard; vision became indistinct; *snowflakes* seemed to appear before the eyes, while a constantly increasing dyspnœa indicated the discontinuance of the transfusion. All symptoms disappeared in a few minutes, and nothing was observed until, after about two hours, rigors set in, giving way after fifteen minutes to a rather high fever, the temperature rising to 104°, the pulse to 115 beats, leaving the patient towards the middle of the night in a sound sleep."

The urine, though high colored, was not bloody, and was not examined for albumen, which Hasse had always found. An urticaria appeared after eight days, as in Hasse's cases. Its subsidence was accompanied "with the vanishing of a strong odor of *lamb*, which had haunted the patient until now."

In the second case the details were similar; 10–12 ounces were transfused, and the subjective sensations were much as in the previous case. The general condition was not notably altered in either case up to the time of writing the report.

An Extraordinary Case.—The *Irish Hospital Gazette* records an extraordinary case recently brought before the Dublin Pathological Faculty by Professor R. W. Smith, of Dublin University. The disease under which the woman succumbed, whose skeleton he exhibited, was one of rare occurrence, and difficult alike to diagnose, treat, or even name. At the time of her death the woman was forty-five years old. Fifteen years previously she had been sent to jail for some offence, which was probably committed while insane, as shortly afterward she was transferred to a lunatic asylum. During the first ten years of her residence there nothing remarkable about her was noticed, and she was employed in washing the floors, etc. At the end of this period she ceased to be able to work, and remained in bed for the remaining five years of her life, gradually becoming more feeble, and dwindling away in stature until she became about one-half of the height she was originally. She did not complain of any pain; her limbs became coiled up in every possible shape, and she seemed gradually to disappear from off the face of the earth. She died, possibly, from constitutional disease of the osseous system. He (Professor Smith), however, looked upon the condition of the bones not as a disease, but as a manifestation of an as yet unknown diseased condition. Professor Smith had weighed all the bones individually; the total weight of the skeleton (including the cranium) was two and one half pounds, which equalled about the fourth part of the weight of a child at birth. The bones were extremely light, soft, fragile, and atrophied in every respect. The number of fractures were prodigious. The ribs were in a hundred fragments. The head of the humerus was bent; the fibulæ were curved; the thigh-bones and pelvis were huddled up together; and the bones of the vertebræ thinned and worn away across the front of their bodies. The lower jaw was atrophied and broken into three fragments; the base of the skull was cribriform all through; and he (Professor Smith) believed that if the woman had lived longer not a vestige of a bone in her body would have been left. As to the nature of this disease he (Professor Smith) believed that it was identical with rickets occurring in the adult; and although that opinion might appear heretical to some, yet he was glad to find that in the last volume of Trousseau's Lectures on Clinical Medicine, that distinguished author had expressed his opinion that osteomalacia and rickets were one and the same disease.

Chloral Hydrate and Camphor as a Local Application in Neuralgia.—It is said that the intimate mixture of equal parts of chloral hydrate and camphor will produce a clear fluid which is of the greatest value as a local application in neuralgia. Mr. Lenox Browne states, in the *British Medical Journal*, that he has employed it, and induced professional friends to do so, and that in every case it afforded great, and in some instantaneous, relief. "Its success does not appear," he says, "to be at all dependent on the nerve affected, it being equally efficacious in neuralgia of the sciatica as of the trigeminis. I have found it of the greatest service in neuralgia of the larynx, and in relieving spasmodic cough of a nervous or hysterical character." It is only necessary to paint the mixture lightly over the painful part, and to allow it to dry. It never blisters, though it may occasion a tingling sensation of the skin. He has found it also an excellent application for toothache.—[We have used this remedy in several cases of neuralgia of the trigeminis, but with no good result.]

Dr. George Bayles develops, in a recent number of *The New York Observer*, a scheme of practical benevolence which well merits consideration. It is a plan for temporary exchange of the poor between city and country churches. Every town parish has a number of sick and feeble persons on the lists of its visitors who are pining for country air; and almost every rural church has at least a few poor whom it would be a charity to send to the city for medical attendance or other special purposes. Why should there not be an interchange of Christian care for the benefit of these two classes? Each congregation entering into the arrangement might establish an asylum, or house of reception, or make arrangements for supporting its guests at private homes. "What system could be devised," says Dr. Bayles, "that would more certainly restore to the churches the Christ-like spirit of humility and self-denial?"—From the *Tribune* of July 6th.

We have known that for a long time people from the country were in the habit of coming to New York, and, with the slight expense of paying their board or "sponging" on relatives, have attended at dispensaries and out-door departments of hospitals and received medical attendance gratuitously, but Bayles out-Herods Herod. He not only proposes to board them while they are here, but would establish a regular system for keeping up an uninterrupted supply of pauper practice. This is one way of helping the young and struggling practitioner—what next?

Dr. A. H. Smith, of New York, informs us that he has used his "extemporary aspirator" with complete success in a case of hydrothorax.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, August 1, 1874.

HYDROPHOBIA.

A curious excitement has of late seized upon the community in this city—a Lyssomania, if a word may be coined for the occasion—an aberration of public common-sense—for which (unless the vicinity of the comet to the dog-star has anything to do with it) some of our brethren of the daily press are in no small degree responsible. Columns upon columns of commentary upon the subject of hydrophobia have emanated from the versatile and all-absorbing intellect of the reporter—that ubiquitous professional interviewer of all professions. In our mind's eye we behold that insinuating individual glide past the servant at the front door, like some Italian bandit summon the distinguished physician from the social board, point at his head the interrogatory lead-pencil, and wring from his reluctant (?) tongue the knowledge of life and death. Then retires the interviewer to his reportorial cave and prepares a draught which, on the morrow, shall curdle the blood of his victim—the public. Not to mention, besides, the heavy editorials, full of abstruse speculation, we would more particularly deplore the admission into newspapers of innumerable senseless communications upon the subject from every credulous ignoramus who is able to wield a pen in the cause of charlatanry.

There is probably no disease within the whole range of medical literature which has a more ancient history than hydrophobia, or which has been more earnestly investigated by scientific men. It has been well described by many distinguished ancient physicians in works still extant—by men whose observations upon the phenomena of many affections are still accepted as models—and in modern times by the most eminent medical and veterinary authorities. Its peculiarities in the dog more especially have been thoroughly studied in the Paris, Lyons, Toulouse, Berlin, and Vienna veterinary infirmaries, with all the minute particularity so characteristic of the enthusiastic French savant and the careful and cautious German observer. Whatever its origin, it is acknowledged to be *incapable of propagation save by specific contagion*, and, as Dr. Russel pointed out in our last number, it bears a very close and striking analogy to syphilis in the mode of its communication and its uncertain period of dormancy before development. In France and Germany rabies is not an uncommon disease; in the wooded districts rabid wolves and foxes constantly exist, and epizoötics of the disorder are almost periodical among dogs in both country and city. The same, to a limited extent, is true of England. Notwithstanding these indubitable facts, there are some persons who actually deny the existence of such a specific disease in either animals or men, and others who declare canine rabies to be so rare as to be almost unknown. Others still assert that the affection may be communicated by healthy but irate animals—even by angry men (and perhaps by viragoes!). Husbands and wives, take warning, and, children, agree together as do the birds in their little nests!

On the other hand, while acknowledging the existence and comparative frequency of canine rabies, we would discountenance the senseless panic which, fostered, as we have said, by a portion of the daily press, has completely demoralized the public mind. Every morning we read a list of "mad dogs" destroyed in the streets after having bitten numerous people. Probably not one, or at least a very small number, of these animals were suffering from rabies. The dog, in hot weather, is more than usually liable to epileptic attacks; he falls down suddenly—loses his natural perceptions—struggles—froths at the mouth—snaps without aim—and in a few minutes staggers to his feet and often rushes wildly away. If let alone he soon recovers—but during his returning consciousness he may snap at those who molest him. All dogs, moreover, are apt to be irritable in hot weather, and it requires little provocation to render them dangerous. Street dogs are particularly exposed to annoyance by children, against whom their resentment is naturally directed, and when angry they will sometimes attack others than those who vexed them.

Such are the poor brutes which are pursued by hooting crowds, and after being despatched by the pistol or the club, receive the compliment of obituary notices in the newspapers.

The question of humanity to animals is, of course, to be considered with that of human safety. But if the two can be easily reconciled—if almost complete immunity can be insured to man, and at the same time his sagacious and loyal friend can be protected from fanatic persecution, we shall have "a consummation devoutly to be wished." The measures lately taken by the Board of Health in this direction have our warmest sympathy. The recommendations embodied in the recent communications to the Board from Drs. Dalton

and Russel are evidently the result of careful reflection by gentlemen who, on account of their special acquaintance with the subject, are best qualified to speak for the Department which they represent. It is assuredly important that the community in general should be authoritatively informed upon matters pertaining to life and health; that undue and unnecessary excitement should be allayed, and that every precaution consistent with law and humanity should be observed.

The agitation, therefore, of the subject of hydrophobia by the secular press has perhaps been productive of some good in enabling the public to be properly instructed by capable authorities; and it is consequently pardonable to some extent. But the *professional sensationalism* which has been developed at the same time we cannot but regard as inexcusable, and we propose to exercise our function of independent criticism in a matter not altogether removed from the sphere of medical ethics.

With reference to the pathological appearances which are said to have been discovered in the McCormick case, we confess ourselves "a little mixed." In *The Tribune* of July 1st we were somewhat startled by an announcement, as follows, in big type:—"Dr. Hammond's Wonderful Experiments in the McCormick Case! Structural Changes in the Medulla Oblongata," etc., etc. We read this article with deep interest, and gazed with proper respect upon the doctor's picture illustrating the extravasation of blood "at the origin of the pneumogastric nerves." Next morning, however, we were intensely disgusted to learn, in a letter from Dr. H. to *The Tribune*, that we and the public in general had been hoaxed by some facetious reporter, inasmuch as the diagram which the doctor had published the previous day represented "a section of the medulla oblongata at a level of *one of the roots* of the spinal accessory nerve, and not the pneumogastric, although similar appearances of extravasated blood were present higher, at the level of the latter nerve." Good gracious! what a revolution in public opinion must have taken place after this statement; and what a gnashing of editorial teeth must have been heard in the precincts devoted to *The Herald*, *The Times*, and *The World!* And how youthful, inexperienced microscopists must have envied the "scientist" who was able, by "sufficiently thin sections," to demonstrate these remarkable distinctions in a specimen "kept in absolute alcohol 18 hours." These last, however, may have derived some consolation from the professor's admission during his lecture before the Neurological Society, in speaking of the cells of the pneumogastric and hypoglossal nerves, that "of course it was not possible, in a fresh and unprepared preparation, to form any definite idea of the relative proportion of nerve to nerve-like cells," etc. And yet, upon such a preparation, from which, with a one-quarter inch objective, it was ascertained that the cells "had almost entirely disappeared," we are requested to rely for "accurate" microscopical appearances.

The illustrations supplied by the late Surgeon-General to *The Tribune* of July 7th were, no doubt, as faithfully reproduced in that enterprising journal as was possible under the circumstances; and yet, though they might have made the unskilful stare, they could not "but make the judicious grieve." One of them reminded us of a *Herald* war map, another was filled with fiends like those of Gustave Doré, while in a third we traced a close resemblance to a representation of superannuated spermatozoa in "Reflexions sur la Mariage," or a similar work. Is it possible that the satyriasis, which is frequently a symptom of hydrophobia, underwent, in McCormick's case, a metastasis to the vicinity of the cerebellum, without actually reaching that organ? Perhaps if some other of the specialists present at the McCormick autopsy had enjoyed the opportunity of participating in Dr. Hammond's microscopical researches, more faithful drawings might have yielded more satisfactory results. It was scarcely fair in Dr. H. to appropriate all of interest in McCormick's brain, as we understand he had likewise done at the Entwistle post-mortem, before the arrival of the curator of Bellevue made it necessary for him to deliver up two or three thin slices. In the latter case Dr. H. discovered no extraordinary lesions.

Dr. Hammond deserves and can scarcely fail to receive from a grateful community many substantial acknowledgments of his concern "pro bono publico" (which, in dog-Latin, might be translated "for the public bone"). It is only proper that his efforts to illuminate the vulgar mind by light from his scientific stereopticon, as it reflects his views of hydrophobia, should not be unremunerative. Certainly it has somewhat alarmed Mrs. Jones to be informed that her Skye terrier, Jip (an irascible little cur under any circumstances), may at any time lose his temper and deposit rabific virus in baby's finger; but Jones has consoled her with the assurance from his morning *Tribune* that there is at least one scientific physician in the city both able and willing to avert the calamity which might ensue were baby treated by us or some other disciple of Youatt with caustic proclivities. Although Jip may thus become a very expensive animal, Jones has determined to keep him as long as he can afford it.

Seriously, we are sorry to be obliged to differ with any of our medical brethren as we have deemed it our duty to do in this matter. But we are not alone in our opinion. The last clause of the verdict of the Coroner's jury in the McCormick case reads as follows:

"To the direct question of the Coroner, whether the post-mortem investigations made in this case *are of any scientific value in determining the pathogeny of the disease, we answer in the negative.*"

This jury was composed of ten medical men, speci-

ally selected for the occasion. Six out of the ten agreed in the opinion expressed. But the reputation of the six who carried the resolution is sufficient to give their views a very positive value in the profession.

Reviews and Notices of Books.

CONSUMPTION AND ITS TREATMENT IN ALL ITS FORMS. By DR. CARL BOTH. Published by Alexander Moore, Boston; Lee & Shepard, Boston and New York; Trübner & Co., London. 1873.

THE first two chapters of this book embrace a history of the opinions held with regard to the nature of the disease and its treatment. The third chapter considers the nature and application of the cellular principle. The conditions for normal cellular life are (1) correct place, (2) correct nutrition, (3) correct pressure. The fourth and fifth chapters are devoted to the anatomy, physiology, and general pathology of the lungs. Under the latter head the movable or blood-cells are regarded as the most important subjects for observation. Primary or real tubercle consists of blood-globules escaped into the connective tissue of the lungs. These occur only in the points of the lungs, for the reason that they are more directly exposed to loss of pressure than any other part of the body. Inherited consumption is due to *innate atelectasis*. The existence of any such disease as consumption, as such, is positively denied, and all that is necessary for successful treatment is an exact understanding of the anatomy in question, and the logic of common sense. The latter item is probably a good thing to have.

In the fifth chapter the stethoscope is set down as being useless for the examination of lungs. In the sixth chapter whooping-cough is regarded as being caused by atelectasis in a majority of cases. In the seventh chapter emphysema is spoken of as a positive preventive against tuberculosis. The three succeeding chapters are devoted to the disorders of the capillary blood-vessels. Under this head the author discusses the various forms of consumption, congestion, and œdema of the lungs, and pneumonia, acute and chronic. The cause of acute pneumonia is set down as abnormal excitement, either physical or mental. The process is always an active one, and rupture of blood-vessels is always present. Chronic pneumonia always has its beginning in the acute, and is invariably the result of neglect in treatment. It is probable that 50 per cent. of the cases of consumption in this country are chronic pneumonia. A slow and hearable expiration under the clavicles is regarded as a certain sign of tubercle formation. This variation in the expiration is produced by irregular passage of air in the neglected bronchi, and the crackling which appears afterwards is caused by arrest of the motion of the hairs of the epithelium, which is owing to the formation of tubercle directly near it. To secure artificial calcification of the tubercles is the aim of the entire treatment. The author describes at some length the measures to be adopted in order to accomplish this, and arrives at the conclusion that, if the management which he recommends is followed regularly, any kind of tubercular affection of the lungs will *invariably* and *readily* become arrested.

The subsequent chapters of the book are devoted to the consideration of the disorders of other anatomical elements of the lungs, disorders of the pleura, disorders which may be mistaken for consumption, and disorders from external causes.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, May 13, 1874.

DR. J. LEWIS SMITH, VICE-PRESIDENT, in the Chair.

A CASE OF CANCER OF THE LIVER, SECONDARY TO VILLOUS CANCER OF THE GALL-BLADDER.

DR. JANEWAY presented a specimen of the above, with the following history:

This patient was admitted to Bellevue Hospital March 8th, 1873, and in the service of Dr. Clark, as visiting physician; Drs. Fleming, Steurer, and Chapin house staff.

Mary Graff, æt. 39, married. She was in such a condition on admission as to give but a poor account of herself.

She gave no history of hereditary disease.

She had till the date of present illness been healthy and temperate.

Six weeks before admission she became jaundiced while suffering from nausea and vomiting. Shortly after her feet became œdematous. She also had occasional chills. The jaundice has persisted since its inception. Her bowels have been constipated.

Pulse on admission, 120; Th. elevated.
March 10th, Pulse, 140; Th. 105°; R. 50.
" 11th, " 120; Th. 102°; R. 44.

On this day she had a violent chill, and died.

During her stay in the hospital she was deeply jaundiced. A systolic murmur was heard at the base of the heart, and also a murmur in the epigastrium.

I saw the patient once, and then found that her liver was much enlarged; that over it a plain friction sound could be heard, and on palpation a plain friction fremitus could be felt, and a few small nodules be made out occupying the liver substance. I thought the most probable diagnosis cancer of the liver. She had also enlarged glands at the root of the neck on the left side.

I made the autopsy on the 12th, with the following results:

The lymphatic glands at the root of the neck, on the left side, are enlarged, rather firm, and on section give to the knife a little whitish fluid; but here and there show little spaces containing a mucous-like fluid. The glands around bronchi and in the mediastinum are in a similar condition.

The heart and lungs were normal. The liver was much enlarged, and on its surface presented several whitish tumors, and in the centre of some of the larger a depression existed. On the lower part of the right lobe the surface is rendered rough by old thickenings. The nodules are disseminated in the liver, the larger ones 1¼ inch in diameter, the smaller of the size of a pea. Beside these nodules the new formation also existed in some of the portal canals as a thickening of sheaths.

The ducts within the liver were much dilated, and contained more or less bile-stained muco-pus; and at one point the liver tissue is honeycombed by these dilated ducts, and partly gangrenous.

On section of the nodules they showed a grayish-white color, and a mucous-like matter escapes to a slight extent, and small spaces are seen containing this.

The gall-bladder is thickened, enlarged, and contains several biliary calculi and muco-pus; at the centre it is much thicker throughout its circumference, and its

surface is covered with numerous elongated villosities. The section of tissue below is of a whitish color.

This tumor divided the bladder into an upper part, which communicated with the duodenum, just below the pylorus, by a round ulcerated opening. A large mass of cancerous glands are situated in the gastro-hepatic omentum, and these occluded the hepatic duct.

A mass of enlarged glands surrounded the lower portion of the abdominal aorta and the common iliac artery; also the accompanying veins. A large ante-mortem thrombus was found in the lower part of the vena cava ascendens, and in the left common iliac vein. This formation was probably due to pressure effected by the above-mentioned glands.

The kidneys, uterus, ovaries, etc., normal.

A microscopic examination showed the gall-bladder to be covered at the thickened part with villosities, covered with a single layer of cylindrical epithelium; that at the base these villosities became approximated, and so short spaces containing epithelial cells arose; also that alveolar spaces existed in the thickened walls of the gall-bladder, containing cells without marked cylindrical character.

The nodules in the liver present spaces containing cells of epithelial character. In some places the space is only lined by a layer of epithelium, which has in some places more of a polygonal, at others cylindrical character. In some of the alveoli a slight projection into the latter happens, looking like a miniature villosity.

The glands present much the same phenomena as the liver.

This case and the one which I presented at the last meeting serve to show that cancer of the liver is not so often primary as might be imagined. Here are two cases in which the gall-bladder was the primary site; and this is just the situation which is most frequently overlooked. I have understood that Virchow, in his unpublished lectures, draws attention to this point.

A CASE OF BILIARY CALCULI AND OBSTRUCTION OF THE DUCTUS COMMUNIS CHOLEDOCHUS.

Mary Quilk, aet. 70, Irish, a domestic, was admitted to Bellevue Hospital on November 27th, 1873.

The following notes of her case have been preserved in the Hospital Record Book by the then house staff, Drs. Fleming, Steurer, and Chapin. Her mother died of phthisis, but with this exception the family record was good. Her health was good until ten years ago, and then, owing to a strain while lifting, suffered from synovitis. There has been some swelling of legs and abdomen, which disappeared, and has not recurred lately. Recently she has been feeble, and only earned enough to supply her wants.

On the Thursday preceding admission she began to have a heavy feeling in the head and sickness at the stomach. By evening her abdomen became swollen, and severe pains manifested themselves in the loins and back. These persisted until Sunday morning, and then gradually disappeared, leaving her feverish.

She complained also of cold chills each night preceding the fever.

When admitted she was quite jaundiced; but owing to the darkness of her rooms could not tell about its time of origin.

At this time the lungs, heart, and spleen were found normal. The liver was of normal size, not tender on pressure.

The urine contained bile pigment, but nothing on microscopic examination.

Nov. 29th. Pulse 99; Th. 101° F.

Nov. 30th. Patient delirious last night.

Dec. 1st. Th. 102° F.; P. 92,; R. 24

Dec. 2d. Th. 102¼° F.; P. 92; R. 32.

Patient restless during the night, had chills and fever alternately, no pain.

From the 3d to the 8th the evening temperature was from 102¼° to 104¼°, and the morning from 99¼° to 100¼°.

From the 8th to the 13th, only 101° or 100° at night, and nearly the same in the morning.

At this latter date bronchitis occurred, which occasioned a slight rise for a couple of days.

16th. Desquamation of the cuticle and slight improvement in the symptoms.

The temperature from the 15th to the 23d was 99° or 99¼° A.M., 100¼° P.M.

On the 17th the jaundice became slightly increased, and from this date, especially after the 20th, the patient was troubled with severe coughing at night.

For the first time since admission into hospital, bile occurred in the fæces on the 23d, and from this date the jaundice diminished.

On the 27th, nausea and vomiting of greenish matter occurred, and a small faceted calculus of cholesterine was found in the fæces; and on the subsequent day several similar calculi.

On the 7th of January a pneumonia commenced in the lower lobe of the right lung, and of this she died on the 13th.

At the time of death the jaundice had for the most part disappeared; an occasional examination of the urine showed granular and epithelial casts. The nuclei of the cells were stained by bile pigment.

I watched this patient very closely during her life, and early made a diagnosis of obstructive jaundice, due probably to calculi, and in consequence examined the fæces daily from a few days after admission till the 28th of December. Previous to this a difference of opinion had existed as to the cause of the jaundice, and at one time the occurrence of considerable tympanites with some fluid made the area of liver dulness apparently considerably diminished; and this apparent diminution continued to some extent to death. For a little while I was afraid that the calculi were producing sufficient irritation to produce abscess of the liver, the hectic fever apparently pointing in this direction.

Autopsy.—On post-mortem examination I found the brain normal. Lungs—Gray hepatization of the lower lobe of right lung; a small spot of red hepatization in the upper lobe of the left lung. Heart, normal. Peritonæum—Ascites of moderate amount. Liver—The left lobe was of normal size, but tilted upwards by a tympanitic condition of the colon beneath. The right lobe was a little smaller than the average. A section through the liver showed the bile ducts in the canals dilated almost to the size of the portal vein in the same situation, and these dilated ducts contained a thick mixture of pus, mucus, and bile. The centre of the lobules was bile-stained. The gall-bladder was small, contracted, its walls thickened, and adherent to transverse colon and duodenum. It contained twenty-eight small calculi, the size of small peas, with facets, and two large ones about the size of marbles. Externally these are white, internally yellow. The cystic duct was dilated so as to admit the little finger, and the hepatic duct was capable of holding index finger. The common and cystic duct contained twenty-two calculi similar to those in the gall-bladder. Two of these were of larger size, the rest small. There was a catarrhal inflammation of the ducts and bladder. The opening of the common duct in the duodenum was slightly enlarged, and just back of it a small calculus, not ob-

structing, was found. The kidneys were large, of a deep green color, and showed lesions of parenchymatous nephritis. Spleen slightly enlarged. The stomach and intestines appeared normal.

The post-mortem examination shows: 1st. That jaundice owing to obstruction from calculi may disappear, owing to removal of calculi, which were probably at the opening into duodenum; whilst others, some of them of considerable size, were present in the ducts. That the dilatation produced by the obstruction was sufficient to dilate the ducts so that the bile flowed around the others. Though, if she had not died of the pneumonia, it is probable that the large calculi would have produced another attack when they reached the narrow terminal portion of the duct.

2d. That the hectic fever in the earlier portion was due to the catarrhal inflammation of the ducts.

3d. How a tympanitic condition of the colon may so displace the liver as to produce apparent diminution in its size, and though I had during life considered this to be the cause of apparently small size of liver, others had considered the liver really as small.

ROUGH CATHETERISM.

DR. MASON presented the genitalia of a man, aged 45 years, for the purpose of exhibiting the results of rough self-catheterism. The patient, who was an inmate of Charity Hospital, had had syphilis for a number of years; was, at the time Dr. M. saw him, suffering from hemiplegia, the result of syphilitic disease of the meninges, and was covered with a pustular eruption. The scrotum was the seat of elephantiasis, and contained an abscess which opened through a sinus into the perinæum. In addition to these troubles, he had stricture of the urethra, with cystitis.

The house-surgeon was directed to use the catheter whenever it was required, and to administer tonics. The patient thereupon declared that he could do the former operation himself, to prove which assertion he drew from under his pillow a number six catheter, and commenced the operation. To the astonishment of all but himself he jammed the instrument past every temporary obstruction until the bladder was reached, declaring that he had practised the same manœuvre two or three times daily for a long time.

The patient died the day afterwards, and the autopsical examination of the urethra showed the existence of a dozen false passages, while the mucous membrane at one point was ploughed up in such a condition as, at first sight, to resemble a polypus. The bladder was much thickened, and was a classical representation of cystitis in an advanced stage. The spinal cord could not be examined.

PYO-NEPHROSIS, NEPHROTOMY, ETC.

DR. LOOMIS presented some fluid removed from a male patient at Bellevue, more for the sake of placing the history of the case on record than for any peculiarities which the fluid itself possessed. The man, aged 35, was admitted into the hospital on the 11th of February last; was a seaman by occupation, of moderately temperate habits, who never suffered from syphilis, as far as could be learned, and who gave a good hereditary history. He had, in fact, always been in robust health, up to three years ago, with the exception of two slight attacks of subacute rheumatism and one attack of facial erysipelas. Three years ago he was, for the first time, seized with intense pain in the left lumbar region, extending round to the corresponding inguinal region, and accompanied by a tingling pain at the end of the penis and retraction of the left testicle. This pain was paroxysmal in character, and continued for about twelve hours, and its subsidence was followed by the passage of a considerable quantity of milky urine. From this time he went on perfectly well, passing his urine without difficulty, until fourteen months before his admission into the hospital, when he noticed, for the first time, in the left lumbar region, a tumor the size of his fist. This tumor was movable, and was not tender on pressure; in fact, he never suffered any inconvenience from its pressure, except considerable soreness after violent exercise. There was nothing worthy of remark until two weeks before his admission, when the tumor had so increased in size as to become troublesome, and his general health became so much impaired that he was unable to gain his livelihood. Physical examination of the chest showed the lungs healthy, and the heart slightly hypertrophied, the second sound being heard with the greatest intensity at the right side of the sternum. The arteries throughout the body, so far as they could be reached, were tense, but there was no particular disturbance to the systemic circulation. A tumor was found in the left lateral segment of the abdomen, extending forwards (the patient lying on his right side) nearly to the median line, and backwards to the lumbar region. This tumor was ovoid in shape, with long diameter transverse, was nodulated and irregular in its outline, was not tender on pressure, and gave a sense of fluctuation when the hand was placed posteriorly, and slight taps were made to the anterior portion of the tumor. The quantity of urine passed was ninety ounces in the twenty-four hours, and was albuminous. He was somewhat emaciated, but not markedly. His countenance was quite healthy, and did not suggest the idea of malignant disease.

When Dr. Loomis saw him, on the 27th of March, he made the diagnosis of pio-nephrosis, and at the same time he suggested the propriety of aspirating the tumor anteriorly. It was aspirated by Dr. Farrington. Previous to this, about the 7th of March, an hypodermic needle had been introduced into the tumor and a small quantity of the fluid was withdrawn, which was found to contain granular matter and pus. Dr. Loomis was not aware that this had been done at the time he made the diagnosis. The needle of the aspirator was introduced two inches above the crest of the ilium anteriorly, and twelve ounces of pus were withdrawn. After the aspirator was used the tumor was much smaller in size, but there was still left a hard mass in the lumbar region. The swelling soon after began to increase, and its size gave the patient much inconvenience. His urine, examined from time to time, was found to contain albumen. Sometime after the second aspiration it was examined by Dr. Janeway and found to contain hyaline casts and pus.

The temperature of the patient during this time never rose above 100°, and his pulse barely reached 96.

On taking charge of the ward in which the patient was, Dr. Loomis called a consultation for the purpose of deciding whether it would not be best to enter the tumor from behind, in the situation in which lumbar colotomy was performed, and after the manner recently and successfully practised by Dr. Lente, of Cold Spring, N. Y. The consultation decided in favor of such a plan, and the operation was accordingly performed by Dr. J. J. Crane, the afternoon of May 12th. Dr. Crane made his incision two inches above the anterior superior spine of the ilium, extending it back very nearly to the spinal column. After reaching the quadratus lumborum muscle he entered the sac and drew off forty ounces of fluid, a portion of which was exhibited to the Society. After entering the sac a

drainage tube was introduced, and retained in situ by adhesive straps. The fluid had been examined, and was found to contain pus, hyaline casts, and blood. At the time of reporting the case the man was in a very comfortable condition; the pus was discharging through the drainage tube, the pulse was 104, and the temperature 101°.

At the request of Dr. Loomis, the President asked Dr. Lente to give an account of the steps of the operation and other particulars.

REMARKS OF DR. F. D. LENTE.

I will merely state, Mr. President, that the operation is precisely that for lumbar colotomy, only instead of opening the colon we open the distended kidney. I made my incision *transverse*, midway between the last rib and *crista* ilii, in order to avoid division of the lumbar arteries; the incision was three inches in length, commencing three inches from the vertebral spines. This gives just room enough in a spare subject, but hardly sufficient in a very muscular or fat one. The objective point is the edge of the *quadratus lumborum;* on drawing this aside you should come directly upon the dilated kidney. Mr. President, I claim that my case, to which Dr. Loomis has referred, is the first instance in which *nephrotomy* proper has been performed, so far as very extended researches in German, French, and English medical literature, made by several medical friends and by myself, enable me to judge. To learn the true signification of the term, we must go back from fifty to two hundred years, and to French writers mostly, though Velpeau, in his Operative Surgery, gives a correct history of it. The operation, and indeed the disease for which the operation is performed, has been almost ignored by the writers of the last fifty years. And the term is indiscriminately applied to the opening of an abscess pointing in the loins; to the cutting down upon and removal of a calculus, ascertained *by the touch* to be present in an abscess; to the entire removal of the kidney, and to such a case as that now under consideration. To show how loose the ideas of the profession are on this point, I may state that within the last twenty-four hours I have been referred, by two of our best anatomists and surgeons, both teachers of these branches in this city, to what they considered undoubted instances of this operation. I read from the pamphlet handed me by one of these gentlemen Mr. Anandale's account of his operation, and his comments upon it, to show how completely unlike it is to true nephrotomy. In fact, as you see, Mr. Anandale expressly says: "I have not called my case one of successful nephrotomy, although similar cases have been so named, for I think this term ought to be confined to those cases in which the surgeon makes a special incision down through the loins, and lays upon the ureter or kidney." But to make the definition sufficiently comprehensive, he should have added: "And where no abscess has formed *external to these parts*, and where the kidney *is free from inflammatory adhesions* to the superjacent structures." He goes on, as you see, to mention the most distinguished surgical authorities, as Tulpius, Benj. Bell, and Benj. Brodie, as ridiculing the idea of this operation, and denouncing it as absurd and dangerous. The other instance brought to my notice is Mr. Bryant's, in his recent work on surgery. But I fail to find any more evidence of his having seen or performed the operation than in numerous other cases to which my friends and acquaintances have referred me. It is more than probable that the operation to which he alludes, but does not even attempt to describe, was similar to the numerous others where abscesses external to the kidney have formed, and even pointed, in the loins before having been opened. However, I will write to Mr. Bryant to ascertain the precise facts of his case. Another important point, to which I desire to call the attention of the Society, is the plan for maintaining a free egress for the pus and other matters. I used a tube, first of gum elastic, then of tin, then of silver, of one-quarter inch diameter, two inches in length, and with flanges for securing it to the skin by means of adhesive plaster. This maintenance of a *free and direct* outlet for matter has been almost uniformly neglected by the numerous surgeons who have ventured to open *peri*-nephritic abscesses; and the openings, having degenerated into sinuses, allowed a reaccumulation of pus, necessitated a new operation, or dilatation; or, as a general rule, offered but a feeble barrier to the almost uniformly fatal result. As the only exception to this rule, I find, since my operation was performed, that Civiale, in his work published in 1819, recommends just what I used first, because I had no better, a piece of old gum elastic rectal tube. He says an inelastic tube could not be borne so well; but here he is mistaken; it is far better. I will only add now, as I propose to give a full history of this important matter at some future time, that my patient is now in her twelfth week, has been walking about the street for some time, and has felt no pain or any inconvenience even from the tube, saying that she will be perfectly content to wear it the rest of her life if there is the least danger in leaving it out.

HEMORRHAGE INTO THE OVISACS—AN INTERESTING QUESTION IN PATHOLOGY.

Dr. Mary Putnam Jacobi presented the ovary of a woman, inmate of the Magdalen Hospital, who had succumbed to pneumonia after complete hepatization of the right lung. Menstruation had occurred two weeks previously, and a recent corpus luteum existed in the healthy right ovary. In the left the fimbriæ of the Fallopian tube were adherent to the ovary, and near the surface were two hemorrhagic clots, one the size of a filbert, the other rather smaller. The clots were the color of currant jelly, and somewhat more consistent, easily enucleable from the cavities containing them. The wall of these cavities was smooth and reddish. Microscopical examination, after hardening in alcohol, showed in the clot masses of blood corpuscles and granular fibrine, and in the wall of the cavity two layers: 1st, an outer, composed of fine conjunctive tissues; 2d, an inner, consisting of a narrow, yellowish band composed of small, round, nucleated cells. These two layers evidently corresponded to the conjunctive tissue-wall and the membrana granulosa of a Graafian vesicle or ovisac, and the examination showed therefore that the hemorrhage had been a simple exaggeration of that normal to the menstrual period, and not an apoplexy into the stroma of the organ, a lesion much more rare, if indeed it ever occur primitively.

It would be of interest to ascertain whether the hemorrhage had occurred during the pneumonia, or at the period of the last menstruation, that preceded the invasion of the disease by one week and the death by two. In the latter case, no obvious cause for the accident existed, unless it were that thickening of the peritoneal coat of the ovary prevented the escape of the ovule and raised the tension in the ovisac. The adherences between the ovary and the Fallopian tube indicated this possibility. The career of the woman, previous to admission to the hospital, suggested, however, other conditions that might have abnormally increased the afflux of blood to the

ovaries during the last menstruation, and thus favored excessive hemorrhage into the ovisacs.

On the other hand, such hemorrhage was well known to occur rather frequently in the course of febrile disease, and often to be accompanied by uterine hemorrhage—the "uterine epistaxis" of Gubler.

The consecutive relations of these lesions were as interesting as their etiology. Hemorrhage into the ovisacs was one,—according to Gallard *the* lesion that initiated retrouterine hæmatocele, whenever the effusion of blood was sufficient to tear the peritoneal covering of the ovary, and continued long enough to fill up the cul-de-sac of Douglas. Again, it was generally admitted that at least one kind of ovarian cysts developed from the ovarian follicules, enlarged by excessive secretion into their cavity. The specimen suggested that in some cases such secretion was preceded by hemorrhage, and replaced the clot when this had been absorbed.

The absence of pain in this and other cases of ovarian apoplexy was very remarkable in its bearings on the theory of pain during menstruation. It was one of many facts showing that the pain does not depend upon the quantity of blood present in the ovaries, but upon modifications of their nerves, and in the mode of circulation. The same remark held true of the uterus.

CANCER OF OMENTUM, AND FIBRO-CYSTIC DEGENERATION OF UTERUS.

Dr. BRIDDON presented a specimen with the following remarks: On the 1st of February, 1874, I was requested by my friend Dr. Stephen J. Clarke to meet him in consultation, and was furnished with the following history:—The patient was a lady of forty-one years. She was accustomed to high living and the intemperate use of wine. Married at the age of seventeen, she had one child at term, and had aborted on twelve different occasions. She had frequently been under treatment for uterine ailments, viz., ulceration and endometritis.

Dr. C. had been called in a few days before my seeing her, and found his patient suffering from acute pain and tenderness in the lower portion of the abdomen. Her uterus was retroflexed and exquisitely sensitive, and he came to the conclusion that she was the subject of metro-peritonitis complicating old displacement. The patient regarded herself as pregnant, though she assured the doctor that she had menstruated regularly. I was only able to verify the conclusion already arrived at. She had an accelerated pulse and exalted temperature. Her abdomen was considerably distended, universally tender, but more so in the hypogastric and inguinal regions than elsewhere. I found the os and fundus uteri on the same plane, the body considerably enlarged and immobile. She certainly was not pregnant. I advised a continuance of the treatment which had been instituted by her physician, and under which the acute symptoms rapidly subsided.

On the 13th I was requested to see the lady again. I found a moderate amount of fluid in the peritoneal cavity, and Dr. C. directed my attention to a tumor which he had discovered in the umbilical region. It lay with its long diameter across the abdominal cavity; its vertical diameter was determined to be about four inches; transversely it was more difficult to estimate, but was probably six or eight inches; its edges could not be made out, and it was not movable; it was not bossy or nodulated, and had no resemblance to the incarcerated contents of a sacculated colon. I expressed the opinion that the ascites was probably due to cirrhosis, and that possibly the tumor might represent malignant disease of the omentum.

Subsequently this patient was seen in consultation by several professional men. One suggested the probability of the tumor being a floating kidney; another gentleman, deservedly distinguished for his acumen and skill as a diagnostician in the abdominal diseases of women, expressed his opinion that the patient had ovarian tumor and an extra-uterine fœtus. Explorations with the aspirator were suggested, but she would permit no operative interference of any kind; and though during the month of April she suffered much from the accumulation of fluid in the cavity of the peritoneum she would not consent to its removal by the trocar. During the last two weeks of April she had profuse and frequent alvine discharges of a very offensive odor, and of the consistence and appearance of tar. On one occasion she vomited a small quantity of blood. She died on the 4th day of March.

Autopsy, eight hours after death, in the presence of her medical attendant, Dr. Clarke, who had tapped immediately after death and removed a pail and a half of thin, straw-colored fluid. Rigor mortis, moderate; surface of skin, pale; abdomen, collapsed; a fusiform swelling could be seen lying transverse in the upper portion of the umbilical region. On opening the abdominal cavity a large mass was seen lying across the space between the stomach and transverse colon; it was composed of the omentum, in a condition of cancerous degeneration; its transverse measurement, ten inches; vertical, four; and its average thickness one inch; its surface, irregularly nodular, was of a pale, pinkish yellow, and its consistence firm. There were small whitish nodules here and there over the visceral and parietal peritoneum; these varied in size from the dimensions of a pin-head to that of half a pea.

The small intestines were collapsed and markedly hyperæmic; colon was in some parts distended with flatus, and at the angles of junction between ascending, transverse, and descending contracted to a considerable degree.

The liver was small, weighing two pounds and a half, its surface drab-colored; on the convex surface of its right lobe were two puckered cicatrices, and a small white subperitoneal nodule; the cut surface presented the appearance met with in the atrophied form of nutmeg liver (red atrophy), the intralobular spaces of a dark red hue, and the intervening or interlobular spaces white; the gastro-hepatic omentum was the seat of the same deposit as that met with in the gastro-colic fold.

Spleen and kidneys were perfectly healthy. On looking into the pelvis it was not possible to distinguish any of the viscera belonging to that cavity. Old and probably repeated attacks of para- and peri-metritis had obliterated everything; the superior strait was roofed in by old false membrane, forming a concave diaphragm, unbroken by anything save the passage of the rectum behind and to the left; no appearance of fundus, ovaries, or anthing else; the contents were removed in mass. After dissecting away a considerable amount of connective tissue, the uterus was found to be retroflexed and considerably enlarged; length of cervix, one inch and a half; of body, three and a half; a neoplasm, either fibrous or myomatous occupied, or rather had developed, at the expense of the posterior wall of the body; there was considerable hypertrophy of that portion of the cervix that joins the body; the walls of the body itself, in front, could be traced up to top of the tumor, where they became thinner, and be-

hind were entirely lost or absent; the canal of the cervix appeared to be occluded at the os internum, or, at all events, after faithful search I was not able to make out the channel of communication. On the os itself was a small vascular polyp about the size of a pea.

The uterine tumor measured two inches and a half in its largest diameter; it was composed of a number of more or less spherical masses united in one. On opening the cavity in which this mass was contained, and which I supposed to be the cavity of the uterus itself, about two ounces of serum escaped. Whether this was secreted by the uterine mucous membrane confined by the impermeable os, or whether I had opened into a cyst, I shall leave for the members of the Society to determine.

Stated Meeting, May 27, 1874.

DR. H. KNAPP, PRESIDENT, in the Chair.

NEPHROTOMY AGAIN.

DR. LOOMIS presented an abdominal tumor and made the following remarks:—

MR. PRESIDENT: At the last meeting of the Society I presented a specimen of fluid taken from an abdominal tumor during an operation upon a patient in Bellevue Hospital. The history of the case was then given, and the manner of operating described. (*Vide* page 409.) I am now able to give the results of the operation, and an account of the lesions found at the post-mortem examination.

The operation was performed on the 12th of May, at 2 P.M. At 4 P.M., after the patient had been removed to his ward, he complained of pain in the left side of the abdomen—vomited almost constantly a greenish matter. His temperature was 97½°, his pulse 96, and his respiration 18 per minute. Two drachms of the sol. morphia were administered, which relieved the pain and caused the vomiting to cease. During the night he coughed very frequently, and expectorated a muco-purulent material. In the morning, May 13th, patient complained of pain in the abdomen; vomiting recommenced, temperature 101½°, pulse 104, respiration 26; breathing hurried; cough troublesome; expectoration muco-purulent, and streaked with blood; patient restless; urine scanty; pus discharges freely through the drainage-tube. The external incision below the tube was reopened, to allow more perfect drainage from the external wound. In the evening of the same day the temperature was 102½°, pulse 120, and feeble; respiration 32; abdomen tympanitic and tender; bowels not moved since the operation; patient continues to vomit a greenish material.

The following morning, May 14th, the temperature was 100½°, pulse 108, and very compressible; respiration 26; countenance anxious; tongue dry and brown; patient still vomits; bowels still constipated; respiration difficult; cough troublesome, and expectoration tenacious and blood-stained. Subcrepitant râles are heard at base of both lungs; patient is too feeble to undergo a careful physical examination. Four ounces of urine drawn by catheter found to be highly albuminous; abdomen excessively tympanitic and tender; discharge from tube is free and abundant.

At 2 P.M. patient was rapidly sinking, and died at 6 P.M., fifty-two hours after the operation. Stimulants were used from the time of the operation until his death; also quinine and opium in sufficient doses to keep him free from pain.

Autopsy was made by Dr. Murray, directed by Dr. Janeway, in presence of Drs. Wood, Smith, Loomis, and the house staff. Brain not examined; lungs, some congestion, with slight œdema; a small spot of red hepatization in right lung, in the upper part of posterior lobe; heart normal; a slight calcification of internal coat of aorta above one leaflet of aortic valves. Abdomen: There is a large tumor occupying the left lumbar region, extending upwards into hypochondria, and toward the median line from this region. Over this tumor the descending colon passes, being quite closely connected to it by the layer of mesocolon. The posterior line of peritoneum corresponds to a line drawn from the anterior superior spinous process obliquely upwards and backwards to the ribs; and the line of reflection is two inches anterior to the incision made in the lumbar region into the tumor.

The peritoneum covering the outer part of tumor, and that reflected from this to the abdominal wall, is irrigated and coated with a little sero-pus, and some slight amount of the latter exists in the pelvis. The other intestines appear normal. Liver presents nothing special. Spleen normal. Right kidney nearly twice as large as usual; waxy degeneration, with some interstitial nephritis, and epithelium in tubes is in some places fatty. The tumor was removed, with bladder and left ureter. On dissection, the tumor is found to consist of renal tissue markedly atrophied. Three sacculi, representing dilated infundibuli, and great increase of fat tissue, both outside of tumor, and in hilum. When the fat was removed the size of the tumor was reduced one-third, and measured 10 inches by 6. The three sacculi are independent of each other. The largest is below, and filled with thick pus, with some mucus and cheesy matter. Into the middle one an incision, one inch in length, had been made during life. Between this incision and the fascia is a layer of fat, which was infiltrated with pus, and from this point pus could be traced to the peritoneal reflection above mentioned. The pelvis communicates with the upper of the three sacculi, and is thin at this point. This sac contains thinner pus than the others. The ureter admits the index-finger, and the walls are much thickened. One inch above entrance into bladder complete occlusion exists. Bladder normal in size and appearance. Ureter admits No. 14 catheter. Testicles: The epididymis on each side is thickened, and its cavity dilated—on one side affecting only the tail, and in the other extending into the body.

DR. LENTE: This specimen presents many points of practical interest from a surgical standpoint, and will also render a brief reference to the history of this important disease, and of the operations which have been proposed for its relief necessary to a proper appreciation of the subject. At our last meeting I made some allusions to these points, and do not wish to repeat what I then said. But in a discussion with my friend Prof. Mason, after the adjournment of the Society, he repeated his assertion that the operation of *nephrotomy* had been performed by one and perhaps two surgeons previous to my attempt, and again referred me to the sources of his information. An examination of these, which I had already made, and a further conversation with him, convinced me, and I may say himself also, that we were differing only in the *name*, and not in the *nature* of the operation; he contending, like many other *modern* surgeons, that any incision down to an abscess originating in the pelvis of the kidney, or even outside of the kidney (for he classed Bowditch's *peri*-nephritic cases in his category), constitutes nephrotomy. Now, what I have ventured to claim, after a very extended research, aided by several medical friends, through French, German, and English literature, in public and private

libraries, extending back more than two hundred years, is, that the operation which I successfully performed some three months ago,—that is, the cutting down upon a kidney *entirely free* from *peri-nephritic disease or adhesion*, with no guide except the anatomical relations of the parts, *had never before been attempted*. Not only so, but had been almost uniformly denounced, by the most distinguished surgeons of the last and the present century, as dangerous and reckless, as will hereafter be shown by a reference to the bibliography of this subject. It is only within a comparatively few years that one or two surgical writers have recommended the operation as a means which desperate circumstances ought to justify. Even Mr. Bryant, to whose operations, as I have already said, Prof. Mason so confidently referred me as examples of my operation, thus speaks of it on p. 452 of his last edition, but recently issued from the Philadelphia press: "When suppuration of the kidney takes place, with or without a calculus, and any *external* evidence of abscess exists, an opening should be made; and it is a *moot question* (italics are mine) with surgeons at the present day whether it is not better practice to anticipate this *pointing* by an early incision." This renders it certain that he has not performed nephrotomy proper himself.

It is not merely a matter of personal pride which induces me to insist so strenuously on a proper discrimination between this operation and others which have been resorted to for the relief of this fatal disease, and especially that for the *removal of renal calculi*, which latter operation is more frequently confounded with nephrotomy than any other;—a want of precision in terms likely to lead to fatal errors in practice, since a careful study of the numerous histories of this disease, and of the operations undertaken for its relief, scattered among the medical records of the last and the present century, indicates that it is a most uncertain and hazardous practice to cut down on these abscesses, even if pointing in the loin, *with a view to extract the calculi* supposed to be there; and even when the abscess has been successfully opened, that the safer practice is not even to probe for calculi, or to make too free even with the finger, since both procedures have been followed by fatal hemorrhages and other accidents. Even when the calculus is discovered, it is often so irregular, and attached so firmly by prolongations into the structure of the kidney, as to render attempts at extraction exceedingly hazardous. Another important reason for discriminating between this operation and others is, that the *delay* which is necessitated, if we wait for external evidence of abscess or pointing, is very dangerous in various ways. The sac, being thin and tense, may burst at any time, with a fatal result, or may work its way into some dangerous or inconvenient locality; or the other kidney, on the integrity of which the patient's chance for life hangs, may, in consequence of extension and long-continued suppuration, take on waxy degeneration. An *early* operation, which can only be nephrotomy proper, is therefore, and for many other reasons, of the first importance.

We thus see that it is not unimportant that the *name* of this operation should be preserved in its original signification; and any one, who will take the trouble to consult Rayer's *Maladies des Reins*, tome iii.; Civiale's *Traité de l'Affection calculeuse*, Paris 1838; P. I. Desault's *Traité des Maladies des voies urinaires*, or the *Mémoires de l'Académie de Chirurgie*, Paris 1812, will be convined that the true meaning of the term nephrotomy is what I have stated; and that it only causes confusion, and, as I have said before, tends to errors of a serious nature in practice, to apply it so indiscriminately to various dissimilar operations. This subject is, however, too extensive and important to be embraced in a short article like this, but will be fully elaborated, in all its interesting details, in connection with the history of my case (now doing well) and of the Bellevue Hospital case; of the *post-mortem* examination of which I now proceed to notice the most interesting and important points, as bearing upon the question of the propriety and safety of *nephrotomy*.

In the first place, it is noted that the ascending colon is firmly attached to the anterior surface of the tumor. This was not detected during life, and should make us careful in the use of the aspirating tube, especially one of the larger sizes. In fact, aspiration is of little service in this disease, as the diagnosis is usually clear enough without it, and as a curative agent it is of no value whatever. The *large size of the tumor*, after so large an evacuation of pus at the operation, is noteworthy. After removal of the *fat*, which reduced it one-third, it still measured ten inches by six; this was due mostly to solid material constituting its walls, but partly to two large independent cysts containing pus. By some it may be thought that we gain but little by the operation if we still leave large cysts unopened. But, in all probability, especially if the operation is undertaken, as it should be, early, before the cyst-wall has become notably thinned, these cysts will, sooner or later, burst into that which has been opened, and so discharge themselves safely. In my own case, now some three months after operation, there is still a large, solid tumor, which caused me some uneasiness until I inspected this specimen, for this leads me to expect no *rapid* diminution of this swelling. In my case there is probably no cyst remaining of any size, because, first, there is no fluctuation, and secondly, it is stated in the post-mortem description of this specimen that the cysts consist of dilated infundibuli, whereas, in my case, I could feel the infundibuli only exaggerated, but not irregular or converted into cavities. This extremely irregular and dilated and sacculated condition also teaches us how likely futile our efforts at finding a stone would be, even if more than one should exist, as our finger could not touch bottom, and our probe would almost certainly fail to find them. A most important point to be noted is the fact that the *peritoneum* was pushed, by the growth of the tumor, entirely beyond the reach of the knife, in the operation, even if the incision had been far more free.

It is noted that "between this incision (that by which the sac was opened at the operation) and the fascia is a layer of fat, which was infiltrated with pus, and from this point pus could be traced to the peritoneal reflection above mentioned" (that is, where it had been pushed from the abdominal wall by the tumor). In planning my operative procedure, the principal fear with me was of this very purulent infiltration, owing to the very loose connection of the kidney with this fascia, and it was this which led me to adopt a large, straight, inelastic tube *as a thorough outlet for the pus*. And this fact constitutes the principal anatomical distinction between nephrotomy proper, as the older writers have defined and limited it, and all the other operations which are so constantly confounded with it. In all of these the adhesions, which have *invariably* formed by the inflammatory processes outside of the kidney, have entirely precluded this danger. This revelation of the autopsy also teaches us that this operation should be conducted with the greatest care, and on a definite plan; especially that after the patient has been turned on

his side a cushion should be placed under the flank sufficient to cause the tumor to be somewhat salient in the lumbar region. In my case the kidney could not be felt at all after the patient had been turned on the opposite side, its great weight dragging it thither, but was fixed, and made perceptible by a folded pillow which I placed under her. In the second operation, this was not done, consequently some time was lost in finding the sac; and after the opening was made, in the efforts to find the latter, in order to enlarge it, the finger injured the loose cellular connection with the fascia above mentioned, and left a tract for the gravitation of the pus. However, this had nothing to do with the result of the operation. Another important point is the condition of the ureter and the cause of the disease. There was no calculus, and this, with the reasons already adduced, should render us chary of probing for calculi. The complete occlusion of the ureter near the bladder gave rise to considerable discussion, as to its probable cause, between Professors Loomis and Janeway, the latter supposing that it was due to the extension of gonorrhœal inflammation, owing to the fact that both epididymes were found to be diseased. But the history of the case hardly seems to warrant this deduction. It remains a very interesting though inexplicable pathological fact. In deciding upon the propriety of this operation, the condition of the other kidney is a matter of the greatest moment, as upon its integrity depends the life of the patient. In this case the physician in charge of the case, Prof. Loomis, was fully aware that it was seriously affected; but it was thought that life would be prolonged by removing the cause of its degeneration. It is a fortunate and a very remarkable and unexpected fact that, as a very general rule, even when one kidney has been for years affected by very extensive suppuration, the other organ is almost perfectly healthy. This is established by the records of a very large number of autopsies. The drainage tube used in this case was one of tin, which I had first employed in my case. I had established the proper length (two inches) by careful examination, and though contrary to the opinion of some of the surgeons engaged in this second case, the autopsy showed that the end was engaged in the sac after death.

Dr. Janeway also exhibited a specimen of adenoma of the breast, removed by Dr. A. B. Mott, more for the sake of exhibiting a beautiful and characteristic display of the gross appearances of the disease than for any particular rarity as a case.

Sawdust Brandy.—An American journal of high moral principles is sorry to learn that a German chemist has succeeded in making a first-rate brandy out of sawdust. We are friends to the temperance movement, says the editor, and want it to succeed, but what chance will it have when a man can take a rip-saw and go out and get drunk with a fence-rail? What is the use of a prohibitory liquor law if a man is able to make brandy smashes out of the shingles on his roof, or if he can get the *delirium tremens* by drinking the legs of his kitchen chairs? You may shut an inebriate out of a gin-shop and keep him away from taverns, but if he can become uproarious on boiled sawdust and desiccated window-sills, any effort at reform must necessarily be a failure. It will be wise, therefore, if temperance societies will butcher the German chemist before he goes any further. His recipe ought not to be made public. He should be stuffed with distilled board-yards until he perishes with *mania a potu*

Correspondence.

SHORTENING OF LIMBS AFTER FRACTURE.

To The Editor of The Medical Record.

Sir:—In The Record of June 1st, 1874, is a letter from my friend and colleague, Dr. Frank H. Hamilton, criticising my remarks on "Fracture," as published in The Record of May 1st, 1874, wherein I said: "The law, however, that shortening must necessarily attend the union of a fractured bone, is incorrect, as can be satisfactorily proved by practical demonstration."

Dr. Hamilton says, in his note of June 1st: "I am not aware that any one has ever laid down a law of this kind. If any one has, he has rendered himself a proper subject of ridicule."

"Believing, however, that Dr. Sayre has been incorrectly reported, or that in an oral lecture he has spoken inadvertently, I wish to call his attention to the paragraphs above quoted, and to ask him how they are to be understood."

In explanation I will say, first, that I did not speak inadvertently, nor was I incorrectly reported. On the contrary, Dr. Carpenter, who reported my lecture, is one of the most accurate medical reporters that I have ever known.

I make no pretensions to having cured *all* my cases of fracture without shortening, but know that many of them have been thus cured; and believing that a student will make a better result if he *tries* for perfection (although he may not attain it) than if he commences to treat a case of fracture with the belief that it must recover with shortening, I *tried* to impress them with the importance of trying for perfection.

That this belief in shortening after fractures is quite general, I am confident, from the number of physicians and students who have spoken to me on the subject, and from the discussion on fractures at the recent meeting of the American Medical Association in Detroit, where Drs. Hodgson, Gregory, and others stated that "union of a fractured bone without shortening was impossible," and most of these persons have referred to Dr. Hamilton as their authority for this belief. I am therefore delighted to know that they cannot quote him in future in order to sustain this erroneous doctrine.

I presume they have, like myself, inferred that Dr. Hamilton did not believe in the possibility of an oblique fracture of a long bone uniting without shortening from reading his published works; and that the inference was a correct one, I quote from page 74 of a work entitled "Deformities after Fractures," published in 1855, by Frank Hastings Hamilton, M.D.

He says: "In conclusion, I wish to say briefly, that in view of all the testimony which is now before me, I am convinced—

"*First*, That in the case of an oblique fracture of the shaft of the femur occurring in an adult whose muscles are not paralyzed, but offer the ordinary resistance to extension and counter-extension, and where the ends of the broken bone have once been completely displaced, **no means have yet been devised by which an overlapping and consequent shortening can be prevented.*

"*Second*, That in a similar fracture occurring in children, or in persons under fifteen years of age, the bone may sometimes be made to unite with so little shortening that it cannot be detected by measurement; but

* The Italics are mine.

whether, in such cases, there is in fact no shortening, since with children especially it is exceedingly difficult to measure very accurately, I cannot say.

"*Third*, That in transverse fractures, or oblique and denticulated, occurring in adults, and in which the broken fragments have become completely displaced, it will generally be found equally impossible to prevent shortening, because it will be found to be generally impossible to bring the broken ends again into such apposition as that they will rest upon and support each other.

"*Fourth*, That in all fractures, whether occurring in adults or in children, where the fragments have never been completely or at all displaced, constituting only a very small proportion of the whole number of these fractures, a union without shortening may always be expected.

"*Fifth*, That when, in consequence of displacement, an overlapping occurs, the average shortening in simple fractures, where the *best* appliances* and the *utmost skill* have been employed, is between one-half and three-quarters of an inch."

And in a later work, "Principles and Practice of Surgery, by Frank H. Hamilton, 1872," on pages 291 and 292 is the following:

"In reference to the prognosis, surgeons have not always been agreed; for, while a large majority of the most experienced surgeons in all countries and all periods of the history of surgery have acknowledged their inability to restore most broken femurs to their original length, a few less distinguished, less observing, or less honest surgeons have from time to time claimed that they seldom or never fail to make these bones unite of the same length as before. if indeed they do not sometimes happen to make them a little longer."

"I have myself often met with this latter class of men; and I have also seen the results of their practice, both in this city and elsewhere; and it has never surprised me to find that so far from always making thighs of the same length as before, they almost constantly fall considerably short of my own standard of average results. In other words—to state a matter of fact very plainly—through ignorance, inadvertence, or intentionally, these men do not tell the truth."

From these quotations I think the reader must be satisfied that the inference drawn by others as well as by myself, that Dr. Hamilton believed in shortening after fractures, was justifiable. I am, however, delighted to know that I did not understand his writings correctly, and that he agrees with me that shortening after fractures is not an absolute necessity, for he now says: "If any one has ever laid down such a law, he is a proper subject of ridicule."

LEWIS A. SAYRE.

25 FIFTH AV., *July 1st*, 1874.

THE NEW DISCOVERIES IN HYDROPHOBIA.

PINE RIDGE PAPERS.

I.

WHO would be a dog at this time, when hydrophobia is such an interesting topic to the community? Not that I am prejudiced against the animal, but no one cares to have his character damaged by the sly and malicious insinuation of people who never attend to their own business, and who persist in misinterpreting the motives of others. Raise the cry of mad dog, and the chances for the poor beast are gone. But this is the dark side of the hydrophobic picture, and it is not my purpose to dwell upon it. The bright side embraces the discoveries that have recently been made in connection with the disease. I wish to make a few remarks upon these discoveries, because I have some new and original ideas which I wish to ventilate before some luckier person does it for me. I have read everything about hydrophobia that has been printed in the newspapers, and you need not know that I have had enough to do to keep posted. But if a man wants to be a specialist he must work. I am certain now that I have read enough about the subject to be entitled to write about it. I have tabulated all the newspaper articles under their respective heads, and can lay claim to some very general ideas upon the subject. Aside from this, I have collected nine hundred and fifty accounts of special cures, and six hundred and ninety-three suggested remedies, which are considered worthy of trial. You can then imagine that I have not been idle in my search for information. In all my extensive reading, however, nothing interested me so much as the discoveries which have been made in the pathology of the disease, and which have been published at such length in a recent issue of the *N. Y. Tribune*. We are informed that the marked abnormal change is a fatty degeneration of the outer layers of the nervous centres, and that the cells are very much enlarged. As you are aware, I am a believer in the microscope, for I have an instrument that can show anything, from a granule the ten-millionth of an inch in diameter up to the largest cell that was ever conceived. I believe I was one of the first in this country to demonstrate the existence of Lostorfer's syphilitic corpuscle, among the first to point out to a class of medical students all of Salisbury's infusoria, and I believe myself competent to see anything. I am aware a great many disbelieve in the microscope, but such observers do not know how to use it. You must understand focussing to a dot in the first place, and you must know what you want to find in the second place. For instance, if you are in search of a granule, and you know it ought to be in a particular part of the field, a long focus will bring it very satisfactorily into view; but if you know this granule ought to be an oil globule, shorten your focus and you can get your refraction. Any observer who can't make his granules refract is either no microscopist or else he has not enough imagination—both very grave deficiencies in these progressive times. We have been told of a new method of slicing nerve-tissue at short notice, and I have no doubt that this of itself will be a great stimulus to microscopic research in hydrophobia and all other kindred disease. In fact, we have it down to a point, and all that it is necessary for future observers to do is to confirm the grand discoveries already made. This, as I have before remarked, is an easy thing to do if you have the right sort of an instrument and know how to use it.

I believe I have said enough to introduce what I have to say upon the subject, and lay what humble claims I may have to originality before the profession. In the first place, I am enabled to say that I have (excuse the first person, but I use it for short) two hundred and twenty-one patients afflicted with hydrophobia now under observation, not including the one hundred and fifty respective dogs who have been known to have bitten these patients. If I should have the misfortune to lose any of these (which is very improbable under my new plan of treatment), I intend to make a fluid extract of the pharyngeal mucus, and a resinous extract of the nerve-centres. For the first extract I

* The Italics are mine.

shall propose the name of Kanine or Extract of *Bark*, and for the latter Hydrophobine, which is probably the real active principle which spends itself upon the brains of the great majority of patients afflicted. I intend to commence my observations (lacking at present the opportunities for post-mortems) upon some sausages, which Humbugedon, of Paris, affirms contains seventy per cent. of an active principle, which he calls *Houndine*, and twenty per cent. of *Kattine*. By these means I expect to obtain this new substance, Kanine, in large quantities. I make these statements to guard against the possibility of being forestalled in my discoveries and in view of the great importance of the subject to me I would ask a place for this letter at once. In some future communication I may give the results of some special observations on this prevalent disease.

PINE RIDGE, ON THE HUDSON. * * *

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from July 5. 1874, to July 18, 1874.

WAR DEPARTMENT,
ADJUTANT-GENERAL'S OFFICE,
WASHINGTON, *July* 10, 1874.

SPECIAL ORDERS,
No. 149.

Extract.

* * * * * *

12. The following Boards of Medical Officers are appointed for the examination of Assistant Surgeons for promotion, and of applicants for admission into the Medical Staff, U. S. Army:

At New York City.

Surgeon Joseph B. Brown.
" John Moore.
" J. H. Bill.
" B. E. Fryer.
Assistant Surgeon A. H. Hoff.

At San Francisco, California.

Surgeon Charles McCormick.
" C. C. Keeney.
" George E. Cooper.
Assistant Surgeon D. L. Huntington.
" " Edwin Bentley.

The Boards will assemble August 4th, 1874.

The junior member of each Board will act as recorder.

* * * * * *

By order of the Secretary of War.

THOMAS M. VINCENT,
Assistant Adjutant-General.

SIMONS, JAS., Surgeon & Med. Director.—Granted leave of absence for 30 days on account of sickness. S. O. 100, Department of the Gulf, June 29, 1874; and extended two months on Surgeon's certificate of disability by S. O. 155, A. G. O., July 17, 1874.

RANDOLPH, JNO. F., Surgeon.—Assigned to duty as Post Surgeon at Camp Robinson, Wy. Ty. S. O., 90, Department of the Platte, July 3, 1874.

WEBSTER, WARREN, Surgeon.—Relieved from duty in Department of California, and to report in person to the Surgeon-General at Washington, D. C. S. O. 154, A. G. O., July 16, 1874.

BYRNE, C. C., Surgeon.—Granted leave of absence for six months with permission to go beyond sea. S. O. 145, A. G. O., July 3, 1874.

BROWN, J. M., Assistant Surgeon.—Assigned to duty as Post Surgeon at Plattsburg Barracks, N. Y. S. O. 131, Mil. Div. of the Atlantic, July 8, 1874.

HUBBARD, V. B., Assistant Surgeon.—During temporary absence of Surgeon Simons, in addition to his other duties, to discharge those of Med. Director at these headquarters. S. O. 100, c. s., Department of the Gulf.

BROOKE, JNO., Assistant Surgeon.—When relieved by Assistant Surgeon Fitzgerald, to report at these headquarters for assignment. S. O. 86, Department of the Columbia, July 3, 1874.

KINSMAN, J. H., Assistant Surgeon.—Assigned to temporery duty at Fort Abercombie, D. T. S. O. 136, Department of Dakota, June 29, 1874.

VICKERY, R. S., Assistant Surgeon.—Assigned to duty at Little Rock, Ark. S. O. 102, Department of the Gulf, July 6, 1874.

O'REILLY, R. M., Asst. Surgeon.—Assigned to duty as Post Surgeon at Fort D. A. Russell, Wy. Ty. S. O. 90, c. s., Department of the Platte.

LAUDERDALE, J. V., Assistant Surgeon.—To report in person to the Commanding General Department of the Missouri for assignment to duty. S. O. 144, c. s., A. G. O.

LORING, L. Y., Assistant Surgeon. To report in person to the Commanding General Department of Arizona for assignment to duty. S. O. 144, c. s., A. G. O.

FITZGERALD, J. V., Assistant Surgeon.—Assigned to duty at Sitka, Alaska Ty. S. O. 86, c. s., Department of the Columbia.

HALL, J. D., Assistant Surgeon.—Leave of absence extended 30 days. S. O. 147, A. G. O., July 7, 1874.

WOODRUFF, E., Assistant Surgeon.—Granted leave of absence for 30 days, with permission to apply for 90 days' extension. S. O. 153, A. G. O., July 15, 1874.

HARVEY, P. F., Assistant Surgeon.—To report in person to the Commanding General Mil. Div. of the Atlantic for assignment to duty. S. O. 144, c. s., A. G. O.

DICKSON, J. M., Assistant Surgeon.—Granted leave of absence for 2 months, with permission to apply for an extension of 2 months. S. O. 144, c. s., A. G. O.

Medical Items and News.

DR. JAMES MCNAUGHTON, of Albany, died June 9, in Paris, of heart disease. He was born in Grampian Hills, Scotland, 1796; was admitted into the University of Edinburgh in 1812, and graduated in medicine from that institution in 1816. He then became a surgeon of a merchant ship, and while on a visit to some friends in Albany he was persuaded to commence practice in that city. Three years subsequently he was appointed Professor of Anatomy in the Medical College of Fairfield, which chair he filled for nineteen years. In 1840 he was appointed Prof. of the Theory and Practice of Medicine in the Albany Medical College, which position he held at the time of his death. For a long time he was considered to be the oldest medical teacher in the world. During his lifetime he delivered fifty-three courses of lectures, and during the whole period that he was engaged in teaching was not absent from his post more than a dozen times. At the time of his decease he was President of the Albany Medical College. He was universally respected, not only for his medical attainments but for his devotion to the interests of his calling.

Original Lectures.

A CLINICAL LECTURE ON INTERNAL HÆMORRHOIDS

DELIVERED AT CHARITY HOSPITAL.

BY ERSKINE MASON, M.D.,

ADJUNCT PROF. OF SURGERY, UNIVERSITY MEDICAL COLLEGE.

TO-DAY, gentlemen, I show you some cases of internal piles, and it is for the relief of these that you will be more frequently consulted than for those that are external, and which we studied the other day. Very much that I have told you about external piles you will find equally applicable to those that are internal. For instance, you will find that a majority of these tumors are chiefly composed of varicose hæmorrhoidal veins. That the causes which produce one also give rise to the other. That very many of the symptoms are common to both; and the means employed in the treatment of one is often as applicable to that of the other. Notwithstanding all this, you will learn that they often differ from the external variety in very many respects. First, as to the locality of these growths. They are always found to arise above the sphincter, though often they are found to project below the anus, and if you are careless in your examination you may mistake them for the external variety. As you saw that the external tumors presented different appearances as to color, size, and consistency, so you will find to be the case with the class we are now studying.

These tumors, at times, are found to be arranged one above the other, as in rows, and if your examination be superficial, some may escape you; and the most certain way of avoiding this is always to have the patient take an enema of warm water, so as to force the piles down just before you operate, or else to resort to the over-distension of the sphincter, an operation which I shall presently show you in a case of fissure. The size that some of these hæmorrhoids attain to is often very great. Here you see, in this patient, a single tumor the size of a pigeon's egg; in other cases you will see several of these protruding through the bowel, and all equally large. At times they will be attached by broad bases to the side of the bowel, presenting a blue or purplish appearance. Again, they may project along the side of the bowel, like distinct columns; their surfaces are usually smooth and glistening, and this class are chiefly composed of veins and infiltrated areolar tissue, covered over with mucous membrane. At times, however, an artery of some size is found in these tumors. Another variety you will often observe projecting from the anus (and you see it well shown in this man, who also has a tight stricture of the urethra, which, no doubt, is the cause of his piles). It is a tumor not at all blue, but of a bright, florid appearance, soft to the feel, and always moist, and which, you will see, readily bleeds upon slight examination; and you notice that the blood which escapes is not at all venous in character, but of a bright arterial hue. Into such a tumor as this we have the capillaries entering largely. Higher up in the bowel, above what is termed the internal sphincter, you will meet at times tumors that are sessile, red like a strawberry, which readily bleed upon being touched, and which are composed chiefly of arteries. I might separate these growths into still other classes, but I think this will suffice for all practical purposes, and you will remember them better than if the division was more minute, and then I have now the opportunity of illustrating just these varieties. There is, however, a condition of the bowel which is always spoken of under the term hæmorrhoid, though it consists of no tumor, but nevertheless gives rise at times to copious hæmorrhage, and is, I believe, always associated with some distinct hæmorrhoidal growth. You will observe at times, in examining the bowel with the speculum, little vascular spots of the mucous membrane, the slightest touch of which will cause an oozing of bright arterial blood. Whether the mucous membrane covering these vessels which give rise to the bleeding is simply changed in character, or whether it is broken, I have in several examinations been unable to determine. All these varieties you will often observe in the same patient, and some have regarded many of them as only changes occurring in the same original tumor, either from long continuance of the disease or as the result of some special form of treatment.

The cause of these internal growths is precisely that which we have seen give rise to the external variety, and therefore it is, you so often observe both classes of tumors in the same individual.

The symptoms that denote the existence of this class is in many respects also like those belonging to the external group. The first symptom which perhaps attracts the patient's attention will be loss of blood while at stool, and for this it is that he often seeks your advice. This woman, for example, will tell you that she frequently loses large quantities of blood in this way. The amount which escapes in this manner varies from a mere tinge to many ounces; nor does it come away only at the time just mentioned. While walking or riding patients are often subjected to this hemorrhage, which is very distressing; and I have known it to be so profuse as to cause faintness in a man that was otherwise strong and hearty. The amount that patients will tell you that they sometimes lose is very remarkable. This hemorrhage, when it recurs frequently, will soon debilitate the strongest person, and induce a long train of symptoms. It is from this symptom these tumors derive their name—hæmorrhoids. When they have increased in size they give rise to tenesmus, bearing-down pains, weight in the bowel, and pain in the back and down the thighs; every one of those symptoms this man has given you. At first these tumors only protrude while at stool, and then return within the bowel, or else are returned by the patients themselves. After a while, the sphincter becoming relaxed through the pressure, they are constantly protruded, or, as the patients tell you, their "piles are down." So many and so large are the tumors, as often seen while in this condition, that by their weight they have brought down some of the mucous membrane. Indeed, such conditions have been taken for prolapsus of the rectum. But be sure that you do not make that mistake, for prolapsus of the rectum is quite another thing. Only a short time ago a patient came to consult me for a prolapse of the bowel, and for which he was wearing an instrument "to keep the bowel in place." Upon examination, however, there was no sign of prolapsus, he was only suffering from hæmorrhoidal tumors, which at times came down and annoyed him. The instrument he was wearing only served to keep the tumors in a continual source of irritation.

At times these tumors, when they are protruded, become grasped by the sphincter; this causes the lower portion of them to swell, and their return for a time impossible, unless proper assistance is at hand, and as a result we may have a case of inflamed piles. So tightly are they constricted at times that sloughing of the parts has taken place, and the patient has become

cured through this accident. More frequently, however, it but leads to ulceration, and sometimes to abscesses in the tumors, and a train of very painful symptoms, in which the neighboring organs, such as the uterus and bladder, sympathize. From the presence of these tumors defecation becomes not only painful, but often very difficult, and we will also find that there is a mucous, perhaps a purulent, discharge from the anus; that troublesome symptom of which we have spoken in connection with external piles, itching, may be also present here, though the external growths be small. When these piles become inflamed, not only do we have local symptoms to combat, but we find also great constitutional disturbance, as high fever, furred tongue, frequent pulse, and great restlessness. This condition will often continue for several days before your patient becomes relieved.

When internal piles are neglected, and have continued for a length of time, you will find the general condition of the person becomes affected. They are apt to become dyspeptic, despondent, bowels more and more constipated, and from constant losses of blood they become pale and haggard. Indeed, we have seen persons that at times are completely incapacitated from attending to their business; and, strange to say, that many will continue to remain great sufferers, and will resort to all kinds of nostrums rather than submit to an operation, which alone holds out any prospect of relief.

Our treatment consists in hygienic, medical, and surgical means, as in the external variety, and the two former means are alike in both. The aperients that are the most valuable are the salines, in combination with sulphur, though I have lately seen a pill of taraxacum and aloes act very kindly. I know aloes is regarded by many as deleterious in cases of hæmorrhoids. This fact has, however, been doubted by some, and Mr. Brodie in his surgical lectures states he has never seen the ill effects arise from this drug that is popularly ascribed to it. It may follow when large quantities of the drug is employed; but this will be found also true of many other cathartics. In the use of such medicines we never desire to produce violent cathartic action—merely to assist the bowels to regular action. Medical treatment will suffice but to palliate in the majority of these cases, or act as an adjuvant to the more radical means, when this affection has been of any long continuance. I know very well that there are hosts of persons suffering from internal piles who never resort to a surgical operation, and I may say are never even counselled to do so by their medical advisers, and yet for long intervals maintain themselves in comparative comfort, and free from very great annoyance. Yet, to accomplish this, great numbers are constantly watching themselves, and may be said to be constantly more or less under some sort of treatment, whereas a comparatively simple operation might suffice to give them more radical relief.

I take it that in those cases where patients are losing large quantities of blood, and in those where the growths are of long standing and constantly protrude, or where they cause great pain and become a troublesome impediment to defecation, or are in any way a serious source of annoyance, and are affecting the general health—all such, other things being equal, viz., there being no disease present that would contraindicate an operation—are suitable cases for surgical interference. You, of course, would not think of operating upon a woman who is in the condition of the woman I have just shown you, she being pregnant; nor on this man, who is suffering from a tight urethral stricture; and yet both these patients have and are suffering from internal hæmorrhoids. In these instances we do all that we can to palliate until after the exciting cause has been removed; then, if they are still the cause of trouble, your operation can be resorted to with every prospect of success. Should your patient be the subject of a displaced uterus, or of some vesical trouble, in these instances, as in every other, seek first the removal of the exciting cause before you resort to an operation.

The modes employed by surgeons for the removal of these tumors are nitric acid, actual cautery, ligature, and the écraseur; at least these are the modes adopted at the present day, though I believe the latter instrument is now very generally and very justly discarded in these affections. Some years ago these tumors we cut off with the scissors, and either left alone or else the wound touched with the hot iron, or the wound brought together by suture to promote speedy union. So serious and even fatal was the hemorrhage resulting from such a course as this in many cases, that this mode of dealing with these internal growths is no longer employed. We will now consider these different appliances in the order I mentioned them. I believe it was due chiefly to Dr. Houston, of Dublin, for first bringing favorably to the notice of the profession nitric acid in the treatment of this affection. Since that time it has been highly extolled by many writers, and again severely deprecated by others, as not only of no avail, but actually very harmful. I think we may find a reason for both the opposing views not only in the manner in which it has been used, but to the class of tumors to which it has been applied. At first, no doubt, it was applied, and may be yet by some, indiscriminately; and as a result, failure is bound often to occur—and the remedy receives the blame, not the operator. If you wish, therefore, to see its favorable action, you must select your cases and apply it in the proper manner. Its use, I think, should be confined solely to those vascular spots of mucous membrane which I have described as sometimes seen in connection with other tumors, and to the small, florid, sessile growths which so readily bleed upon the slightest touch. If you but confine its use to these cases, I feel sure you will meet with happy effects; while, if you apply it to the other tumors, you will often be disappointed. There is no objection to using this, at the same time you treat the larger growths by other means, as I have often done, and with the happiest result. The acid you use should be of the strongest kind, and the parts should be well brought down into view by the means I have described. Then dry the parts and touch them lightly with a piece of wood dipped in the acid, taking great care that no acid comes in contact with surrounding mucous membrane. You then oil the parts and return them; often one application will suffice, if the growth be extremely small, or you may have to repeat the operation after a little interval. The pain attendant upon this is often but slight, and of short duration as compared to other means; and with very nervous patients not so terrifying. The acid acts by the inflammation of the parts it produces, which closes the vessels, and, as a result, the tumor shrivels.

The next operation to which I call your attention is that by means of the actual cautery, and which I have frequently made use of in this hospital, and the application of which I shall now show you. The use of the actual cautery in these affections is a very old one; but in more recent years it was reintroduced by the Dublin surgeons. Its great advocates among English surgeons are Mr. Henry Lee, of St. George's Hospital, and Mr. Henry Smith, of King's College Hospital, and

the operation is now chiefly done with the aid of a clamp, suggested by the latter gentleman. It is the instrument I now hold in my hand. The claims that have been advanced for this operation were that it is freer from danger than the other operations; recovery was more rapid; that it is less painful, and, I think, it has also been said to be free from hemorrhage. I must tell you, however, that cases have been reported, where not only complications have happened, but death also has followed from pyæmia. With respect to pain, I have seen patients complain severely for some time after its use; and as to hemorrhage, I have seen that follow in several cases, and where I have taken great pains, to follow strictly the rules laid down for its use. Recovery, perhaps, may be more rapid than after the ligature, though my employment of it, perhaps, has not been frequent enough for me to speak authoritatively on this point. I regard it, however, very favorably in some cases; and not one to be treated with such scorn as a recent writer has seen fit to do. In our venereal ward we frequently have had women coming in suffering greatly from hæmorrhoids, at the same time having chancroids both of vulva and anus. Here the clamp and cautery I have almost always used, there being less danger of the resulting wound becoming inoculated than if the ligature or écraseur were employed. You apply the clamp and cautery thus: seizing a tumor with forceps or tenaculum, I drag it down, and grasp it around its base with a clamp and strongly compress it—the pressure may be maintained by means of this screw—then, with a pair of curved scissors, you clip off the pile a little distance from the clamp, so as to leave a stump over which an iron heated to a dull red heat is drawn. This is for the purpose of producing an eschar, and thus sealing the vessels; after which you slowly open the clamp to see if there be any hemorrhage. If bleeding occurs, another application of the iron is required. You must bear in mind that in the use of this means you should never try to hurry the operation by grasping more than one tumor at a time; if you do, you will be more liable to have hemorrhage.

I shall now show you the use of the ligature as applied to piles. This is used far more frequently than any other means, and is, I think, very justly regarded, almost universally, as not only the best, but as safe a mode of operating as we can employ. Mr. Allingham, in a recent work, has cited many hundred cases as having been operated upon in this way, both in private practice and in a hospital specially devoted to diseases of the rectum, in which the number of deaths following have been extremely few. Some have even gone as far as to assert that it may be used without the slightest risk of serious trouble. But I think I have often told you that no surgical operation, however slight, can be truly said to be absolutely free from danger in every case. The ligature strongly recommends itself both from the facility of its application, the great safety, and the radical relief which so frequently follows. You will hear of some who are said to tie off piles without pain. In your practice you will find few patients, I think, who will not suffer more or less for a short time after this operation; though in this respect you will find great differences in individuals. In the use of the ligature you do not wish to use a large one; if it does not give rise to more pain, it certainly is longer in coming away. A moderately fine, waxed, silk ligature, or what I like as well, is one of linen, such as I am about to use. I prefer this on account of its strength. You readily procure it at any of the sewing-machine stores. Various methods have been recommended for its application, and some with respect to lessening pain. Bodenhamer, a writer on "Diseases of the Rectum," makes it a point never to draw down the tumor with the forceps, but simply applies the ligature around the tumor a little from its base, so as to avoid including the mucous membrane that lines the bowels. I have tried this, but have not found it so free from pain, as I was led to suppose might be the case when reading the description of his operation. In the ordinary operation you seize the tumor and drag it down; this gives you a clear view of the part you wish to ligate. You then surround the tumor with the ligature (and I do not think it necessary that the ligature should surround the pile *close* up to its attachment to the wall of the bowel). The ligature is now to be tied *tightly* with two knots. Cut off the ligature a little distance from the knot; and in some instances the tumor, a little beyond the ligature, is cut off, and the parts returned into the bowel. The great benefit, I think, you derive from not tying your ligature *close* up to the base of the tumor, and in not dragging them down too forcibly, is that by thus not including the coats of the intestine you thereby avoid a troublesome contraction of the bowels, which I have seen follow in a case where several tumors were thus ligated.

The method that Mr. Allingham has recently described as the one practised at St. Mark's Hospital, I have of late frequently performed, and regard it with great favor. It consists in separating the pile, with the scissors, from its attachments to the muscular and other tissues of the bowel beneath its mucous membrane. Your cut is carried up parallel to the wall of the bowel for a little distance—perhaps an inch or more—and the neck of the tumor, so to speak, is then ligated. In this way you tie little more than the vessels which form it; and there being less tissue for the ligature to separate, it comes away sooner. The vessels running parallel to your incision, you are not likely to wound them, and if you have any bleeding point, it is readily seen and should be tied at once. The wound you make being an incised one, readily heals. This operation I now proceed to show you. After this operation of the ligature your patient should be confined in bed for at least a week, and should not go about for some days further. The ligatures will usually come away from the fourth to the sixth day; and the bowels should be confined for the first three or four days. Should they not move before this, a saline may be given. I am in the habit not only of having the anus frequently bathed with warm water, but also with a small syringe, having the parts, so to speak, irrigated with tepid water containing opium and a little carbolic acid. It not only adds to the cleanliness, but subdues the pain your patient may suffer. Immediately after the operation a pad of picked lint over the anus, and held in position by a tight T-bandage, will also prove serviceable in subduing pain. You will find some patients able to go about much sooner than others; indeed, I have known them to walk about in a day or two after the operation; but this is wrong, they should remain quiet some days after the ligatures have come away, in order that the ulcer, which necessarily is present after the separation of the pile, should heal kindly. After all these operations you must remember the bladder, for not unfrequently will you be required to use the catheter for a day or so after the operation. The operation by means of the écraseur, I do not intend to show you. It is dangerous, as liable to give rise to stricture, and I do not think it should be resorted to when we have safer means at hand.

The accidents that have been known to follow operations upon hæmorrhoids are tetanus, pyæmia, and hemorrhage. With respect to hemorrhage, when the ope

ration is done properly, I do not think it will often be serious. About the means employed to arrest bleeding after operations upon the bowel, I must speak to you of at another time. Tetanus and pyæmia are rare accidents.

Will hæmorrhoids ever return after an operation, will be a question you will often be asked. That they will in some instances, is true, especially if a patient neglects himself, and thus brings about the condition which originally induced his piles; whereas if he is careful, he may remain clear of them. Should they return, there is no impropriety in repeating the operation. There are some people who seem to be peculiarly predisposed to a varicose condition of their veins, and that, too, at a comparatively early period of life. In this class, I think you will find a disposition to the return of hæmorrhoidal difficulties under any treatment that may be used.

Original Communications.

THE PROBABLE ORIGIN OF SOME FORMS OF NERVOUS DEAFNESS.

By SWAN M. BURNETT, M.D.,

KNOXVILLE, TENN.

An examination of the reports of hospitals, infirmaries, and dispensaries of several years back, will show that nervous deafness constitutes a large per cent. of the recorded cases of aural disease.

The great improvement in our methods of diagnosis of affections appertaining to the auditory apparatus has of late largely diminished this per cent., and we now find that a great number of those cases that would hitherto have been referred to disorder of the nervous perceptive organism are classed among affections of the conducting mechanism. And, furthermore, there is no doubt but that as our knowledge of aural pathology is extended, and our skill in diagnosis becomes more certain and accurate, this percentage will be still more largely reduced.

Such has been the case in the sister department of Ophthalmology, where amaurosis is now no longer what it was once facetiously defined to be, viz., "a condition where neither patient nor surgeon was able to see anything," and it is but reasonable to hope for such a happy day in Otology.

But until some instrument similar to the ophthalmoscope is invented, whereby we can ocularly examine during life into the condition of the auditory nerve and its expansion, our knowledge of its pathology must remain to a greater or less extent a matter of conjecture, while reasoning, inductive and deductive, must take the place largely of actual demonstration, and the term "nervous deafness" remain, as amaurosis did for so long a time, but a word to conceal our ignorance.

Thanks to the investigation of such men as Hughlings Jackson of London, we are able to trace a connection between some forms of nerve blindness and certain intracranial irregularities. Reasoning from analogy, it is but fair to infer that some such connection should exist between nervous deafness and troubles within the cranium; but, so far as we are able to inform ourselves, but little advance has been made in that direction.

The investigations of Menière, of Paris, have indeed given an impetus to study in that direction, but as yet little knowledge of a positive character has been attained. Still these researches, and those of other men working in the same field, have taught us that we may hope for important results in the course of time.

Some cases of impaired hearing have recently fallen under my notice, whose previous history and present condition have caused me to reflect on the *probable connection between the occurrence of sick-headache or migraine in early life and the existence of a diminution of hearing power in more advanced years.*

How many persons have unimpaired hearing power at middle life? To answer this question definitely is not an easy matter, for the defect may be slight, and there is always a disposition on the part of those affected to conceal as far as possible any deficiency in this particular, and where only one ear is affected this is comparatively easy. It is the opinion of Troeltsch that "the majority of persons beyond fifty or sixty years no longer hear well." Impairment of hearing at this age and beyond, is commonly considered to be physiological, and no attempt is generally made to investigate the cause.

But, again reasoning from analogy, are we warranted in referring a failure in the faculty of audition to the influence of age simply, any more than we would be in considering a retinal or optic-nerve derangement a natural accompaniment of advancing years? Of course we do not refer to the loss of accommodative power, which is a demonstrated physiological change, and in accordance with the natural laws of structural development.

When, therefore, there is a nervous deafness before the age when the whole powers of the system are giving way, with no evidence of existing or previous disease of the conducting apparatus, but with a history of an antecedent cerebral trouble of whatever kind, are we not justified in inferring the existence of some connection between the two occurrences?

Our reasons for an affirmative answer to this question we propose to give in this article, and shall now relate the following cases in point:

Case I.—P. K., aged 50, was from his eighteenth to his thirty-eighth year subject to very severe attacks of sick-headache, which commonly ran a very definite and regular course.

The first sensations would manifest themselves in the morning, generally about 10 o'clock. These premonitory symptoms consisted of a dimness of vision, to such an extent sometimes, that he was not able to recognize an individual ten feet distant; and a feeling of vertigo, occasionally so strong that to prevent falling he would be obliged to lie down.

Soon pain would set in, confined mostly to the temples, and gradually increase in intensity for some three or four hours. If nausea followed by vomiting took place at the end of this period, the pain would abate, and soon he would fall into a slumber, from which he would awake much relieved or entirely well. If vomiting did not occur, a drowsiness would supervene, merging gradually into sleep, followed by the same results.

No trouble referable to the auditory apparatus was noticed until about the twenty-fifth year. At that time, after a very severe attack, he noticed for the first time tinnitus aurium. Soon after, a deficiency of hearing power became apparent, beginning in the left ear, but in course of time involving the right. Subsequently to this he noticed that after an attack his hearing was much worse for several days.

His hearing power gradually diminished from year to year, until about two years ago, since which time there has been no perceptible difference.

On examination it was found that the watch, on the

left side, could only be heard on contact; on the right, at about one inch.

No abnormality was found in the conducting apparatus. Tuning-fork on the forehead not heard in either ear.

From him I learn some facts in his family history which bear directly upon the question under consideration.

His father suffered from sick-headache in early life, and at forty years of age began to lose his hearing power, which increased to the time of his death. No assignable cause for the deafness, so far as he knew.

The patient also had a brother who was affected in a manner very similar to himself, and who began to notice a diminution of hearing power at thirty-five. He is now about in the condition of our patient. Of the rest of the family, three brothers and one sister, none had headache and none suffered from impairment of hearing.

CASE II.—Mrs. M. K., aged 48, suffered from youth until some time beyond maturity with most violent attacks of sick-headache, similar in all essential particulars to the case above related. Ten years ago, about the time when the headache ceased, tinnitus aurium began, with impaired hearing power, which has increased until now; the watch is heard only on contact, in either ear.

Examination shows the membrana tympani to be healthy, and no signs of present or past inflammatory action.

Tuning-fork on glabella not heard.

CASE III.—L. E. M., æt. 50, had severe sick-headaches in early life, and has them yet occasionally, though not nearly so often as formerly. The history of each attack is essentially as follows: The pain begins in the morning when she first awakens, generally on one side, and by preference the right; commencing in the forehead, it progresses backwards to the occiput and down to the neck and shoulder of the affected side. It increases in severity for a length of time varying from twenty-four to thirty-six hours, when she finally vomits and becomes drowsy, then falls asleep and awakes free from pain.

For the last several years, during and for some time subsequent to the attacks, the hearing power has been very much diminished. This state of things would continue but for a few days, however, and she would return, as she thought, to her normal hearing standard. At the same time she would have a tinnitus aurium and vertigo; and more latterly, when she was not suffering from headache, a vertigo accompanied by tinnitus would come over her.

Within the last three or four years her friends have noticed that they had to speak louder to her than they formerly did, and for the last few months her hearing power has very rapidly diminished. *Status præsens*, R. W. 1 inch; L. W. 5 inches. Tuning-fork on glabella not heard in either ear, except on closure of the meatus, and then only faintly, and more in the left ear than in the right. Constant tinnitus. No abnormality found in the external or middle ear. Has never had any pain or discharge from the ears.

These are undoubtedly cases of so-called migraine. The history is clear and unmistakable, the symptoms pathognomonic. The question for us now to determine is, Is there any connection between the occurrence of migraine and the existence of the deafness which, so far as we are able to determine, is purely nervous?

If migraine is to be considered primarily a gastric disorder, an evidence of deranged digestion, then there will be little hope of establishing such a connection. But, if we look upon it as a neurosis, with attendant gastric symptoms, the way is more clear to a satisfactory solution of the difficulty.

We have to thank Dr. F. E. Anstie, of London, for a positive classification of migraine among the nervous affections. Some, it is true, before him, had written upon the nervous character of some forms of migraine; but he is the first to take the ground that it belongs exclusively to the neuralgias, and to point out its connection with other neuroses, either antecedent or following. We have not space to reproduce his argument in full, as it was published in the London *Practitioner* for November and December, 1872, but the tenor of his observations goes to show that:

... "The personal (and usually the family) history of migrainous patients, taken together with the remarkable course which the disease runs, even in ordinary cases, and the important and suggestive group of occasional complications which are associated with it, almost compels us (*per viam exclusionis*) to look upon the medulla oblongata as the starting-point of the disease, and to believe that migrainous pain means atrophic molecular irritation in the trigeminous root, that migrainous vomiting means a similar process in the vagus root, and so on, for the whole widely varying group of possible phenomena of the disease."—(*Prac.*, Jan., 1873.)

Accepting this as the pathology of migraine (and it is certainly in all respects the most satisfactory of any yet offered), the connection we are seeking is not difficult to demonstrate.

But in order to do so satisfactorily, we must review somewhat carefully the anatomical questions involving the origin of the nerves in question, viz., the trigeminus and auditory.

The deep origin of both is in the medulla oblongata. According to Gray, "the deep origin of the larger or sensory root (of the fifth pair) may be traced between the transverse fibres of the pons varolii to the lateral tract of the medulla oblongata, immediately behind the olivary body. According to some anatomists it is connected with the gray nucleus at the back part of the medulla, between the fasciculi teretes and restiform columns."

According to Brunner (*Archiv Oph. und Otology*, vol. ii. No. 1, page 328), the origin of the acoustic nerve has been traced:

"1. Into fibres of the striæ acustica. The latter take their course around the restiform body along the floor of the fourth ventricle, to the median line, where they disappear. Their further course is not known. 2. Into fibres to the ganglion of the acoustic. 3. Into fibres running to the funiculus cuneatus et gracilis (sensory). 4. Into the floor of the restiform body (motory). 5. Into fibres to the accessory acoustic ganglion of Stilling. This is a small body situated beside the restiform body in the cerebellum. 6. The acoustic ganglion is connected, by means of the so-called acoustic cord, with the cortex of the insula Reilii near the fossa Sylvii. The acoustic cord constitutes a bundle of fibres which can be traced posteriorly to the acoustic ganglion in the medulla oblongata, where it becomes lost."

It will be seen from this, that though no very direct connection can be traced between the origin of the two nerves throughout their whole extent, still their ultimate origins ramify pretty generally throughout the medulla and contiguous parts, in such a manner that morbific causes acting on the one could very well be supposed to affect the other. These facts can be interpreted in such a manner as to throw much light both upon migraine and upon some forms of nervous deafness.

Suppose you have in the medulla an "atrophic molecular irritation" (a term indefinite enough, it is true, but it serves to give a "local habitation and a name" to some pathological condition there and then present) and affecting the origin of the trigeminus, what is to hinder that "atrophic molecular irritation" from invading the origin of some portion at least of the portio mollis of the seventh pair, or, if you choose to call it so, the centre of audition in the brain? The vertigo and disturbance of equilibrium generally present in these cases could, in like manner, be referred to a like irritation of the centre controlling equilibrium.

In all cases of migraine it is not likely that this "atrophic molecular irritation" would invade the cerebral centre of audition, and consequently we would not look in every case for nervous deafness as a sequela.

I give these cases and the opinions based thereon to the profession, in hope that some, whose opportunities for observation of such cases are more extended than my own, may examine into the truth of the position I have taken; and to stimulate investigation upon the subject: for, so far as I am aware, no such connection as I have tried to establish has been maintained by any writer on Otology.

JUNE 1st, 1874.

DYSPEPTIC SYMPTOMS DEPENDENT UPON TUMOR.

BY E. M. HUNT, M.D.,

METUCHEN, N. J.

Two cases of abdominal tumor have come under my observation the past year, which are worthy of some comment. Dr. C. McKnight Smith, of Perth Amboy, aged 70, a man of robust frame, of excellent general health, of no known hereditary taint, and of regular habits, commenced several months since to show some dyspeptic symptoms, accompanied with pallor and moderate loss of flesh, with occasional nausea. An examination of the urine showed oxaluria, and this persisted throughout his sickness. About two months after his first ailment a small tumor was detected in the left hypochondriac region. It seemed flat and nodulated, and to be growing slowly; but its attachments and character were of difficult diagnosis. The case was seen by Dr. Baldwin, of New Brunswick, Drs. Draper, Gouley, and Hunt, of New York, and by myself, in consultation with Dr. Clarke, of Perth Amboy. It was variously suggested that it might be enlargement of the left lobe of the liver, scirrhus, fæcal impaction, or a glandular mesenteric enlargement. The tumor enlarged until it spread itself over the umbilical region, and could be felt in a flattened and nodulated form, as movable from side to side. There was at times some pain, easily controlled by opiates. After about two months the patient kept his room and his bed a good part of the time, but was still quite comfortable. For the last six weeks anæmia and increasing loss of flesh, slight œdema of the abdomen, and increased frequency and feebleness of pulse, showed accelerated progress of the disease. He died, however, a few days sooner than was anticipated, quite suddenly, while sitting up in bed, without any warning of rapid sinking. Post-mortem revealed a tumor, the basis of which was the entire omentum. The whole apron, from the stomach downward, had become thickened and nodulated with bunches like rounded buttons, of varying sizes, piled one upon another, so as to make in parts a thickness of four or five inches. They were all umbilicated and run together like a confluent variola, some as large as a two-cent piece, others small and distinct. Some of these smaller ones were scattered over the lower surface of the diaphragm and the lining membrane of the abdomen. One on the outside of the intestine had undergone a sloughing process, and involved the interior of the intestine, and was probably the immediate cause of death. The thickest part of the omental bunch was in the left hypochondriac region, but it spread variably over the whole extent of the omentum. Under the knife it cut with some solidity, like a firm sarcoma. This omental formation of tumor by aggregation of disk-shaped nodes was new to most of us, as the mass seemed definitely formed by the conjunction and piling together and upon each other of all these developed cells or hollowed rings. The question of cancerous disease is one often difficult of positive affirmation. Two excellent microscopists arrived at different conclusions in this regard.

Mr. I. P., a farmer aged 60, of spare form, of good health and habits, of no known hereditary taint, came under treatment one month before the death of Dr. Smith. He too complained of loss of appetite, and was showing some loss of flesh and anæmia, with jaundiced appearance of skin and constipation. Tonics and moderate cathartics and good diet had been prescribed, with such bathing, oiling, and friction of skin as would improve its function. A closer examination, however, revealed a tumor the size of a goose-egg just below the umbilicus, inclining to the left. It was harder than the other, a little more movable, but having attachments which seemed to be continuous above the margin of the left ribs. There was no vomiting at the time, but soon severe cough and free expectoration occurred, which in a few weeks yielded under free use of cod-liver oil and tonics. The tumor increased in size, and, after about three months of walking invalidity, the patient was confined to his bed. There was but little pain, but much loss of flesh and occasional vomiting. The tumor enlarged about to the size of a large cocoa-nut. Occasionally, but rarely, there would be an attack of vomiting. The close attachment extending under the ribs on the left side seemed to point to this as the starting-point of the abnormal growth. The stomach was suspected of being involved from the first, but I was not fully satisfied, until, by quick pressure, I was able to force eructation, and afterward, by giving the patient two or three swallows of milk, could, by succussion, get the motion of the fluid in the tumor. After three months of emaciation the patient died as a candle would go out, and from complete inanition. A post-mortem showed the stomach firmly attached to the left lobe of the liver throughout its entire lower boundary. The stomach itself was so involved outside and inside throughout its entire upper curvature, that its interior had lost all appearance of stomach, except that reaching from the cardiac to the pyloric orifice was a curve of natural appearance, of calibre not larger than the duodenum, and capable of containing not over an ounce and a half. All the rest was a mass of abnormal growth, creaking under the knife. A specimen could not be allowed for microscopical examination. The patient owed his prolongation of life and freedom from vomiting to the fact that this stomach tube, while it could do but little digestive work, could still convey food readily to the intestines. These cases are worthy of note, because the first, although anomalous, had such a marked character of its own, like a well-defined form of skin disease; and in the latter, which was in all probability cancerous, the diagnosis of locality was dependent upon a mode of examination

slightly different from usual. Besides, in the middle stage of this disease, the man made recovery from serious lung complication. His ability to digest oil, starch, and milk was enough for this. Both cases were typical and instructive to me, as they may be to others in respect to future diagnosis.

REPORT OF A SINGULAR CASE OF STABBING.

By A. T. HENLEY, M.D.,

MACON STATION, ALABAMA.

In June, 1870, I was called to see Wells Kelly, a mulatto, aged 24, who had been stabbed in the back with a knife. Upon examination I found the patient lying on his face, with the knife still deeply embedded in the wound, with only the handle projecting, and apparently suffering very little pain. The knife was an ordinary pocket one, of large size; and the blade measured three inches in length, by a little over a half inch in width, and was firmly fixed in the vertebral column at the sixth dorsal vertebra, with the cutting edge towards the left side; *i. e.*, the blade was in the left side of the body of the vertebra, with the edge outward. When I arrived the knife had been in the wound over an hour. I attempted to remove it, thinking it an easy matter; but, to my surprise, found that all the strength I could exert had no effect upon it, no matter in what direction the force was employed. After trying faithfully to remove it by traction, I made a crucial incision around the knife, and cut down to the bone, carefully dissecting back the flaps in such a way that the bone was clearly exposed, showing the blade to be embedded entirely in bone. I again tried every way that I could think of to pull it out, and again failed. I then called the strongest negro man on the place, and made him try his strength. He got over the patient, and I directed him to pull exactly in a line with the blade, while I put my knee over his hips, and at the same time required an assistant to hold his shoulders down; and notwithstanding he used strength enough *to raise the patient entirely from the bed by the knife*, yet it did not move at all. I tried every position for the patient I could imagine, and yet neither position nor strength seemed to affect it in any degree. I then sent for consultation, and instruments to chisel away a part of the bone. A physician soon arrived, and notwithstanding he tried his best, yet he failed. While waiting for the instruments I made one more effort, and, to my surprise, with scarcely any force, the knife suddenly came out. Perhaps, now, some one will suggest that it was caught between two of the vertebræ; yet we examined carefully to see if that could be the case, and could clearly make out the joints both above and below the knife; and besides, we could see it up to the hilt *in the body of the bone, and nowhere else.*

The wound was inflicted by a man standing directly in front of Kelly, with his right hand around his body under his (Kelly's) left arm. After the removal of the blade there was very little hemorrhage; and I immediately closed the wound and applied cold dressings, giving one-fourth of a grain of morphine. I continued the treatment for a few days, and had no bad results. There was no inflammation of any consequence, and no pneumonia or pleurisy. Sensation was somewhat impaired about the lumbar region for about two weeks, but there was no loss of motion. The patient made a good recovery, but died two years afterwards, in the penitentiary, of another trouble. The case is one so unusual that I have thought it might be of interest to the profession.

TWO CASES OF RUDIMENTARY UTERUS.

By SUSAN DIMOCK, M.D.,

RESIDENT PHYSICIAN TO THE NEW ENGLAND HOSPITAL FOR WOMEN AND CHILDREN.

Mrs. Mary W——, twenty years old, a tall, well-developed blonde, was sent to me by her family physician in autumn of 1872, to be operated upon, if advisable, for atresia vaginæ. The patient had always been tolerably healthy as a girl, and had developed physically at the usual age; had, however, never menstruated, nor had the slightest molimena ever been felt. At the age of nineteen the patient married, remained well for six months, but was then seized with severe and frequent headaches, dizziness, want of appetite, and feeling of general debility. Under a tonic treatment these symptoms were alleviated, and when the patient consulted me three months later, she seemed well, with the exception of slight anæmia. Upon examination I found the external organs of generation normally developed, and the remains of the hymen existing as four or five carunculæ. The vagina was one inch in length, and large enough to admit the end of the common bivalved speculum. Not the smallest opening was to be found in the vaginal walls. By introducing a catheter in the bladder and a finger in the rectum, the rudiment of the uterus was to be felt about an inch above the blind extremity of the vagina, measuring about one inch in length and one inch and a half in width at the fundus. The thickness at the fundus seemed little more than half an inch. The ovaries were not to be felt. Of course an operation here was out of the question, since, even were the difficulty of making an inch-long passage to the uterus overcome, the functions of menstruation and procreation would be impossible, the uterus being in so undeveloped a condition.

A few weeks after observing the above case, the following came under my care, which, independent of the anomaly in development, presents some points of interest:

Louisa B——, aged eight, a healthy little German Jewess, was brought to the N. E. Hospital for Women and Children, quite unable to stand or walk without screaming with pain. The parents stated that she had always been well until three days before, at which time, while playing with other children, she had tried how far she could stretch her feet apart. The next night she complained of great pain at the vulva, and the parents found a swelling there which they took for a prolapsed uterus. Indeed, upon a cursory examination this seemed to be the case, for protruding between the labia was a small tumor presenting the exact appearance of a congested cervix uteri. Upon etherization, however, this tumor was found to be a hypertrophied ring of mucous membrane around the orifice of the urethra. The hymen was found torn (from the strain at the time of injury?), the vagina of normal length and width, but presenting at its upper extremity a cul-de-sac without trace of uterus. With the catheter in the bladder and finger in the rectum a small thickened strand was to be felt above the vagina, barely larger than the united Fallopian tubes would be.*

The ring around the meatus having been very sensitive to the touch, I removed, drawing it out with dressing forceps, and cutting above with curved scis-

* The uterus is formed *not* from the uro-genital sinus, but by the coalescence of Müller's ducts, the upper ends of which become the Fallopian tubes.—*Weber, Waldeyer, Frey*, etc.

sors. The bleeding, which was for a moment profuse, was checked immediately by the actual cautery. The little patient felt very slight discomfort after the operation; during ten days she was placed in a warm sitz-bath to urinate, and at the end of two weeks, as she could walk without difficulty, and the wound had entirely healed, she was discharged.

Two cases of supposed occlusion of the vagina from defective development have lately been brought to me. Both proved to be the merely epithelial adhesion which is so frequent, and which gives way upon slight stretching with the probe or finger.

Progress of Medical Science.

TREATMENT OF ACNE ROSACEA.—In *The Practitioner* of July, Dr. W. B. Cheadle describes the difference between acne depending upon disease of the sebaceous glands and acne rosacea; showing that the latter is caused by relaxation of the vascular system of the diseased tissue. He believes that the proper method of treating the affection is to increase the tone, and produce contraction of the blood-vessels, and this, he thinks, can be accomplished by the use of the faradic current of electricity. Four cases are reported by him, all of which were more or less benefited. "In three of them the eruption had so far faded after treatment by this method for from two to three months, that the patients professed themselves sufficiently cured, and ceased to attend. The fourth case is still under observation. The patient has repeatedly appeared almost well, and has then ceased to attend for a time, returning with a relapse in the course of a few weeks, and always improving steadily on the application of the remedy." In these cases a current of medium intensity was applied for about ten minutes twice a week.

THE LIVER IN JAUNDICE.—Dr. J. Wickham Legg contributes some papers to the *British Med. Jour.*, in which he describes the changes in the liver which follow an obstruction to the flow of bile into the duodenum. These morbid appearances divide themselves into two heads: 1, The changes met with in the bile passages; 2, Those met with in the parenchyma of the liver itself. The first effect of an obstruction of the bile-ducts is a dilatation of the duct behind the obstruction; the gall-bladder, if the common duct be occluded, suffering first and becoming filled with dark viscid bile. If the gall-bladder be distended and the cystic duct become occluded by a gall-stone, for instance, the bile undergoes absorption, and its place is taken by a colorless fluid, which is either viscid or limpid, constituting the hydrops micæ felliæ of the older writers. The extent of the general dilatation of the ducts, both within and without the substance of the liver, depends upon the degree of the obstruction, and the length of time it has lasted. In some cases the dilatation does not reach the interlobular ducts, and it is doubtful whether the capillary ducts ever become varicose. The left branches of the hepatic ducts have, in the cases Dr. Legg has examined, always been much more dilated than the right. The catarrh which is set up by the long-continued obstruction, sometimes goes on to suppuration of the duct, and a mixture of pus and mucus is found in the biliary canals. In another form multiple abscesses appear. In all cases of long-continued obstruction to the bile-ducts, the connective tissue grows, the overgrowth beginning a few hours after the obstruction. The chief change in the liver-cells is atrophy, their contents seems to be chiefly fat, and a few pigment granules; the fat is rarely in large drops. Within a few days after complete obstruction to the gall-ducts, the liver ceases to secrete glycogen. The function of the secretion of the biliary acids is believed to be interfered with or abolished, but further evidence is required. The quantity of urea excreted by the kidneys has in several instances been quite normal. —*The Practitioner.*

AN EXPERIMENTAL OBSERVATION ON HAY FEVER.—*The Practitioner* for April has a letter from Prof. Binz, of Bonn, on this subject; and as the disease appears to be on the increase in this country, and is the cause, annually, of so much suffering, we reproduce the letter in full, hoping to receive the results of numerous experiments made with the remedy during the coming season:

"From what I have observed of recent English publications on the subject of hay fever, I am led to suppose that English authorities are inaccurately acquainted with the discovery by Professor Helmholtz, as far back as 1868, of the existence of uncommon low organisms in the nasal secretions in this complaint, and of the possibility of arresting their action by the local employment of quinine. I therefore purpose to republish the letter in which he originally announced these facts to myself, and to add some further observations on this topic. The letter is as follows: *

"'I have suffered, as well as I can remember, since the year 1847, from the peculiar catarrh called by the English "hay fever," the speciality of which consists in its attacking its victims regularly in the hay season (myself between the 20th May and the end of June), that it ceases in the cooler weather, but on the other hand quickly reaches a great intensity if the patients expose themselves to heat and sunshine. An extraordinarily violent sneezing then sets in, and a strongly corrosive thin discharge, with which much epithelium is thrown off. This increases, after a few hours, to a painful inflammation of the mucous membrane, and of the outside of the nose, and excites fever with severe headache and great depression, if the patient cannot withdraw himself from the heat and sunshine. In a cool room, however, these symptoms vanish as quickly as they had come on, and there then only remains for a few days a lessened discharge and soreness, as if caused by the loss of epithelium. I remark, by the way, that in all my other years I had very little tendency to catarrh or catching cold, while the hay fever has never failed during the twenty-one years of which I have spoken, and has never attacked me earlier or later in the year than the times named. The condition is extremely troublesome, and increases, if one is obliged to be much exposed to the sun, to an excessively severe malady.

"'The curious dependence of the disease on the season of the year, suggested to me the thought that organisms might be the origin of the mischief. In examining the secretions I regularly found, in the last five years, certain vibrio-like bodies in it, which *at other times I could not observe* in my nasal secretion.

"'. . . They are very small and can only be recognized with the immersion-lens of a very good Hartnack's microscope. It is characteristic of the common isolated single joints, that they contain four nuclei in a row, of which two pairs are more closely united. The length of the joints is 0.004 of a millimetre. Upon the warm objective stage they move with moderate activity, partly in mere vibration, partly in shooting backwards and forwards in the direction of their

* Cf. Virchow's Archiv., vol. xlvi., p. 100.

long axis; in lower temperatures they are very inactive. Occasionally one finds them arranged in rows upon each other or in branching series. Observed some days in the moist chamber, they vegetated again, and appeared somewhat larger and more conspicuous than immediately after their excretion. It is to be noted that only that kind of secretion contains them which is expelled by violent sneezing; that which drops slowly does not contain them at all. They stick tenaciously enough in the lower cavities and recesses of the nose.

"'When I saw your first notice of the poisonous action of quinine upon infusoria, I determined at once to make an experiment with that substance, thinking that these vibrionic bodies, even if they did not cause the whole illness, still could render it much more unpleasant through their movements and the decomposition caused by them. For that reason I made a neutral solution of sulphate of quinine, which did not contain much of the salt (1.800), but still was effective enough, and caused moderate irritation on the mucous membrane of the nose. I then lay flat on my back, keeping my head very low, and poured with a pipette about four cubic centimetres into both nostrils. Then I turned my head about, in order to let the liquid flow in all directions.

"'The desired effect was obtained immediately, and remained for some hours; I could expose myself to the sun without fits of sneezing and the other disagreeable symptoms coming on. It was sufficient to repeat the treatment three times a day, even under the most unfavorable circumstances, in order to keep myself quite free.* There were then no such vibrios in the secretion. If I only go out in the evening, it suffices to inject the quinine once a day, just before going. After continuing this treatment for some days the symptoms disappear completely, but if I leave off they return till towards the end of June.

"'My first experiments with quinine date from the summer of 1867; this year (1868), I began at once as soon as the first traces of the illness appeared, and I have thus been able to stop its development completely. I have hesitated as yet in publishing the matter, because I have found no other patient† on whom I could try the experiment. There is, it seems to me, no doubt, considering the extraordinary regularity in the recurrence and course of the illness, that quinine had here a most quick and decided effect. And this, again, makes my hypothesis very probable, that the vibrios, even if being no specific form but a very frequent one, are at least the cause of the rapid increase of the symptoms in warm air, as heat excites them to lively action.'

"I should be very glad if the above lines would induce medical men in England—the haunt of hay fever—to test the observation of Helmholtz. To most patients the application with the pipette may be too difficult or impossible; I have therefore already suggested the use of Weber's very simple but effective nose douche. Also it will be advisable to employ the solution of quinine *tepid*. It can, further, not be repeated often enough, that quinine is frequently adulterated, especially with cinchona, the action of which is much less to be depended upon.

"Dr. Frickhöfer, of Schwalbach, has communicated to me a second case in which hay fever was cured by local application of quinine (cf. Virchow's Archiv. [1870], vol. 51, p. 176). Professor Busch, of Bonn, authorizes me to say that he has succeeded in two cases of 'catarrhus æstivus,' by the same method; a third patient was obliged to abstain from the use of quinine, as it produced an unbearable irritation of the sensible nerves of the nose. In the autumn of 1872 Helmholtz told me that his hay fever was quite cured, and that in the meantime two other patients had, by his advice, tried this method, and with the same success."

TREATMENT OF SERO-SANGUINEOUS CYSTS BY ELECTRICITY.—Dr. A. Amussat says: "We often meet with cysts on the anterior part of the neck, developed either in the thyroid gland, the ganglions, or the connective tissue.

"When these tumors are small they are merely unsightly; but as they increase in size they interfere with deglutition and respiration, they force the patient to carry the head either to one side or forward, and they usually cause a habitual congestion by their pressure upon the vessels of this region. Their contents vary, but they generally consist of serum either alone or mixed with blood, or of pure blood. Their inconvenience obliges the patient sooner or later to seek a cure, and they are usually treated by incision, excision, extirpation, injections of iodine, etc. Celsus recommended cauterization, and I treated a case successfully by this method in 1852.

"Four years ago, having been consulted for a sero-sanguineous cyst of the neck, I cured it by galvano-cautery, as will be seen in the following observation:

"*Oct.* 8, 1869.—In consultation with Dr. Morpain, I saw M. S., aged 69 years, who had a tumor on the right side of the neck. I found a fluctuating and indolent tumor, extending from the inferior angle of the lower jaw to the sternum. The patient had first noticed it about eleven years before.

"Thinking that it was a sero-sanguineous cyst, I punctured it with an exploring trocar, and drew off about half a pint of chocolate-colored fluid. We then agreed to leave it until it should fill up again, when we would endeavor to cure it by galvano-cautery.

"*Dec.* 3.—I punctured the tumor with an exploring trocar just above the sternal end of the clavicle, and directing the point obliquely upward and backwards I brought it out behind the angle of the lower jaw. I then withdrew the stylet, and passed a platinum wire through the canula, and securing the ends of the wire, I drew the canula back until its extremity was in the cyst, the contents of which I evacuated, after which I withdrew the canula. Then, connecting the wire with a battery, I thoroughly cauterized the cyst, bending the wire so as to reach every portion of the walls. The operation terminated, I applied poultices to the neck, at first cold, afterwards warm. The patient was not confined to his bed, and made no change in his diet.

"*January* 7, 1870.—I withdrew the wire, and dressed the orifices with simple cerate; by the end of April the orifices had completely cicatrized, and the patient was cured. I saw him six months afterwards, and could find no other trace of the tumor than the two small cicatrices.

"In 1860 Dr. Otterbourg requested me to examine a lady twenty-four years of age, with a tumor on the left side of the neck, which had been treated for several months with discutients without amelioration.

"Upon examination I found a cyst the size of a walnut, situated over the course of the carotid, the pulsations of which could be distinctly felt through it.

"Madame S. dated the development of the tumor back to a labor three years before.

* There is no foundation for the objection that syringing the nose could not cure the asthma which accompanies hay fever; for this asthma is only the reflex effect arising from the irritation of the nose.—B.

† Helmholtz, now Professor of Physics at the University of Berlin, is, although M.D., no medical practitioner.—B.

"Being quite a belle, she refused to allow any operation which would be likely to leave a visible cicatrix.

"My associate was of the opinion that we had better puncture the tumor, and after drawing off its contents, inject it with tincture of iodine, but the volume of the tumor, and more especially its situation over the artery, determined me to propose electrolysis, which was accepted.

"Every other day I introduced into the tumor two fine steel needles, which I connected with a small-sized Bunsen's pile during five minutes. When the patient was able to support this without inconvenience I used a larger pile, and by the third séance I employed one twenty-one centimetres in height. After a time, in order to hasten the reduction of the tumor, I applied tincture of iodine between each séance. After forty-five applications of electricity, Madame S. was so well satisfied with the result that she gave up the electricity, but continued the application of tincture of iodine. I heard from Dr. Otterbourg some time afterwards that she was completely cured.

"These two are the only cysts of the neck that I have treated by electricity. The first was cured by galvano-cautery alone, the second by electrolysis in connection with tincture of iodine, which latter, after a while, sufficed alone to complete the cure; but as it had been employed before using electrolysis without any result, and as the size of the tumor was considerably diminished by the electricity before recommencing the use of iodine, I believe that a complete cure would have resulted from the use of electrolysis, if it had been kept up long enough.

"With regard to the first case, if I should have a similar case again, I would withdraw the platinum wire immediately after the operation, in order to abridge the duration of the treatment."

Reports of Hospitals.

BELLEVUE HOSPITAL.

Notes of Practice and Peculiarities in Treatment.

Second Surgical Division—Dr. Shaw, House-Surgeon.

SILICATE OF LIME SPLINT.

This splint is obtained by using a saturated solution of chloride of lime and the silicate of soda. It is supposed that a chemical decomposition occurs between the two articles, which gives rise to silicate of lime. The apparatus is made in the following manner. First apply a bandage which has been soaked in the solution of lime and then squeezed very nearly dry. Next give the bandage applied a coating of silicate of soda. Then apply another bandage wet in the lime solution and follow it with a coating of the soda. Thus go on until the requisite number of bandages are applied. The splint when dry is much harder than the silicate of soda splint. It is much lighter than a plaster splint.

PENETRATING WOUND OF THE ABDOMEN.

A wound of this sort was just above the crest of the ilium upon the left side, and was inflicted with a knife. The patient was being kept fully under the influence of opium. Respirations were retained at twelve to fourteen per minute. In this manner the peritonitis was held in abeyance, and at this writing the patient is doing very well.

CUT THROAT.

The arytenoid cartilages were exposed in a case of cut throat. Like cut throats in general, he was willing to comply with any requirement which would facilitate recovery. The wound was healing by granulations.

SURGICAL DRESSING.

A case which we saw was one in which amputation had been performed. The dressing is a valuable one for all similar granulating surfaces.

℞. Basilicon ointment..... ʒi.
Balsam of Peru..... ʒi.
M.

Apply, spread upon lint.

BURNS.

One case of burns was being treated by giving the parts a coating of mucilage of gum arabic and dusting it over with powdered lycopodium. This was reapplied as soon as any of the covering fell off.

Another case was being treated with a solution of nitrate of silver grs. xx. to the ounce of water. Much stronger solutions, as forty or sixty grs. to the ounce, are sometimes employed. The burn was dressed, but the wound had filled up with granulations to something more than a level. Apply the solution with a camel-hair brush, and leave the surface exposed to the influence of light and air. The solution is renewed whenever fissures occur in the coating thus formed. The application does not cause much pain.

WOUND IN THE PRECORDIAL REGION.

The wound was inflicted by a pistol ball. There were extensive pericardial and pleuritic effusions.

Treatment supporting and quieting.

Prognosis grave.

LACERATING WOUND INVOLVING THE KNEE-JOINT.

A boy had been run over by a street car. The tissues about the joint were extensively torn and the joint opened. The inflammatory action had been combated by means of rest, ice, leeches, etc., and recovery had been so far established that the knee was being strapped with adhesive plaster. It was doing exceedingly well.

ACUTE SYNOVITIS.

The synovitis involved the elbow-joint. The limb was in a jointed splint which could be regulated by means of a key so that any angle desired could be maintained. In this way perfect rest could be secured. The patient was also kept in bed. Rest, leeches, and ice were the chief elements in treatment.

Third Medical Division—Dr. Young, House-Physician.

PNEUMO-HYDROTHORAX.

When the patient was admitted to the hospital she was in a typhoid condition, and had pneumonia affecting the lower lobe of the right lung. By dint of the free use of stimulants, quinine, good nourishment and nursing, she gradually improved. Eight days after admission the temperature fell and her general condition was very much improved. About one week after the disappearance of all her typhoid symptoms, the temperature suddenly became elevated 3° or 4° without any apparent cause. The next day it fell again, and then for four or five days an irregular temperature was present which could not be accounted for. About a week after this, evidences were

obtained of the presence of fluid in the right pleural cavity. The fluid gradually increased, and soon reached as high as the angle of the scapula. The introduction of an exploring needle determined that the fluid was pus. The aspirator was employed and forty-four ounces of pus removed. The general condition of the patient was very much improved. The morning following the use of the aspirator, there were evidences of lung expansion. About a week afterwards, succussion was obtained. The aspirator was used a second time, and sixty-four ounces of extremely fetid dark brown pus were removed. The patient was now doing badly.

A free incision was made through the chest-wall in the sixth intercostal space, and several ounces of fetid pus removed. Since that time, the cavity has been washed out daily with a weak solution of carbolic acid. Since the free incision was made, all her symptoms, both constitutional and local, have improved in a most remarkable manner. The noticeable features of the case are the recovery from the pneumonia; the pleurisy becoming the leading feature in her case while in a debilitated condition, consequently an empyema from the *beginning;* the marked benefit she received from the first aspiration; the marked retrogression as soon as air entered the pleural cavity; and the very marked improvement that followed the free incision. It was remarked by the visiting physician that, as soon as air enters the pleural cavity, causing the pus to become fetid, aspiration is unavailable, and the free incision should be resorted to at once.

PYO-NEPHROSIS AND ASPIRATION.

A case of this sort was interesting in one feature at least. The patient was a man aged 36 years. About one year and a half ago he first noticed a tumor in the left lumbar region which had *steadily* increased in size until admission to the hospital. He has never suffered from pain during its development. Bowels have, as a rule, been very regular. Has had no chills or elevation of temperature. There is an imperfect history of an attack of venal colic occurring several years ago. Has never had any special disturbance with the urine until about a year ago, when he first began to notice that it was somewhat turbid and of a whitish color.

Physical examination revealed the presence of a tumor of considerable size, flatness upon percussion extending from near the median line in front to the spinal column. There was a finger's-breadth of tympanitic percussion between the upper border of the tumor and the lower border of the spleen. There was scarcely any doubt but that it was a tumor of some kind connected with the kidney. By exclusion the diagnosis was reduced to three possibilities. Pyo-nephrosis, hydro-nephrosis, and hydatids.

It was determined to make an explorative puncture for purposes of diagnosis. The needle of the aspirator was introduced at the point where the tumor seemed nearest to the surface, and ʒ xij. of *pus* were withdrawn.

It was remarked by the visiting physician that no hesitation need be made with regard to introducing the needle at any point that best suited the convenience of the operator, without special regard to peritoneum or intestines. If a coil of intestine should be punctured the perforation would in all probability prove harmless. Removal of the kidney was suggested. Simple removal of the pus is not curative. One week later, no particular change in the condition of the patient.

THE DIFFICULTIES IN DIAGNOSIS OF ABDOMINAL DISEASE, WITH PAIN AND CRAMPS AS THE ONLY SYMPTOMS.

PATIENT admitted March 7th, and had been sick one week previous to his admission. Night watchman; moderate drinker.

On Saturday, one week before admission, he got his feet wet. Went to bed Saturday night and soon after was taken with "pain and cramps in his bowels." These lasted all night. Sunday morning he took a couple of drinks of brandy and Jamaica ginger which gave some relief, but not marked. Was about more or less during Sunday and Monday forenoon. Pains continued, but less severe. Monday afternoon was obliged to go to bed, and remained in bed until Wednesday; then sat up an hour or so; afterwards went to bed, and remained until Friday. During all this time he remained in bed on account of the *pain*. If he drank anything he would immediately vomit, and the material vomited was of a greenish color. Took physic on Monday and Tuesday, but bowels did not move afterwards during the time he was sick previous to admission. Physic worked very well. When the physic operated some fresh blood was passed, and the discharges were accompanied with some smarting and burning pain at the lower portion of the bowels. No hemorrhoids.

Two years ago he suffered from a similar attack, and was unable for three months after his discharge from the hospital to lift any weight, or bear percussion or pressure over the right side of the abdomen. The attack at that time lasted about eight weeks, during which he suffered more or less from pain in the bowels. Recovery was apparently complete, although convalescence was somewhat prolonged. Since that time he has been well until the present attack. Bowels are usually constipated, moving only with the assistance of medicine. Bowels were constipated at the time of the occurrence of the present attack. No history of lead-poisoning. Pulse 70. Temperature normal.

Physical Examination.—Abdomen a little full and muscles triflingly rigid. Slight tenderness upon pressure; more particularly upon the right side of the abdomen in the region of the cæcum. There is little more fulness upon the right side than upon the left. Percussion gives considerable pain upon right side. Has improved markedly since admission. The pain from which he has suffered has been colicky in character, rather than like the characteristic pain of peritonitis. There was no dulness upon percussion at any point. Such was the history. What was the diagnosis? What was the thing sought for?

Sympathy between the large intestines and stomach being more marked than between small intestines and stomach, would direct attention to the large intestine in search of an explanation for the *vomiting*. Was the trouble obstructive or inflammatory? If a localized peritonitis continuing for some time, could the patient be able to travel about? It was thought by one of the visiting physicians that he might. The pains were colicky. What was the cause of the colic? Perhaps some impaction of fæces in the ascending colon, producing obstruction. Obstruction may also be due to some old peritoneal adhesions. Colic dependent upon constipation does not as a rule last a week at a time. Was it typhlitis, or was it perityphlitis? It was concluded that the case was one which required careful watching. In the present condition the essential feature in the treatment was rest, for with rest the patient was comparatively comfortable.

ANTHRAX.

In a vast majority of cases crucial incision and caustic applications are injurious. A very simple and efficient method of management is to take a broad piece of spongio-piline, cut a hole through it large enough to receive the apex of the tumor, apply it, and let the anthrax itself alone. This method of treatment is sufficiently simple to secure for itself some ridicule, "but try it," says one of the visiting surgeons, "and you will be surprised at results."

ABSCESS OF THE LIVER.

A case of abscess had opened externally. The patient had had another abscess of the liver, which had discharged into the colon. Under the treatment adopted, the case was progressing very favorably. The treatment was, first, to inject the sac with a solution consisting of equal parts of water and tincture of iodine. This was continued every two or three days for some time; but now the injection, having been gradually increased in strength, is composed of pure tincture of iodine. What the termination will be cannot be safely predicted, but the progress of the case is thus far very satisfactory. The abscess has diminished in size very markedly since the commencement of this plan of treatment.

PENETRATING WOUND OF THE CHEST.

A patient was stabbed with a knife; and had not expectorated blood. It is not proper, however, to infer from this that the lung has not been wounded. A number of days sometimes elapse before blood is coughed up. Ordinarily, patients with wounded lungs expectorate blood at once.

Absence of expectoration for forty-eight hours after the receipt of the wound is not evidence that the lung has escaped injury. Neither is the entire absence of expectoration absolute proof in that direction.

POTT'S FRACTURE.

In Pott's fracture, and also any fracture about the lower extremity of the tibia, the point of interest is whether the internal lateral ligament is torn open or not.

If the internal lateral ligament remains unruptured there will be no deformity with almost any plan of treatment; but if the internal lateral ligament is ruptured, with almost any form of treatment that can be devised there will be deformity. Ruptured ligaments are never completely restored. Patients with this condition of things are always informed at the commencement of treatment what they may expect.

WHAT WOULD BE A CORRECT DIAGNOSIS?

Patient æt. 18. Male. Irish. Previously healthy until March 15. "Taken with pain in the head while in church. Soon got very cold; got very hot afterwards." Chill lasted less than an hour. Fever continued until admission. Vomiting came on after the fever. Vomited occasionally, and that without taking anything into the stomach. Pain in the left side. Dry cough. Since admission, which was upon the 17th, cough has continued, and has been accompanied with some thick, yellowish expectoration. There has not been any characteristic expectoration of croupous pneumonia. No blood expectorated. When admitted he had a temperature of 106½°.

March 18, P. 120; R. 36; T. 104½. Evening, P. 112; R. 38; T. 101½; March 19, P. 116; R. 48; T. 104½. Evening, P. 108; R. 28; T. 102½; March 20, P. 116; R. 32; T. 103½. From this time T. was 104½, 105½, 102½, and March 23, 104½; March 24, morning, 98½; P. 94; R. 32. Pulse, 24th, soft and easily compressed. Skin moist. Sordes upon teeth. Vomiting has continued to some extent since admission. Urine negative.

Physical Examination, March 24th.—Vocal fremitus somewhat more marked upon right than upon left side of chest. Percussion gives slight dulness over scapular region. Posteriorly, bronchial respiration over the scapula, and not heard at any other point. Large moist râles over middle portion of left lung.

Anteriorly, slight dulness over middle portion, left side. Râles as found behind, but less distinct.

There was no history of bronchitis existing early in the case.

Temperature has not followed the ordinary course of croupous pneumonia. "What's the matter?" The visiting physician was in some doubt. Meanwhile the boy had been receiving a liberal supply of quinine and stimulants; nourishment; application of cold compresses to the chest, and rapidly changed while his temperature was so high. The chances were very much in favor of his recovery.

ARREST OF BILIARY SECRETIONS AND NO DIAGNOSIS.

Male, 40 years of age. Sailor. Temperate. "Been sick 18 months, and has been yellow 18 months." Pain in the infra-mammary region upon the *left* side. Has not suffered from pain at any other point. No vomiting at any time. Urine, red; and passages from bowels clay-colored.

Physical Examination.—Body well nourished. Jaundice of a quite bright yellow color all over the body. Abdomen slightly more prominent above the umbilicus than normal. Veins upon the abdomen not enlarged. The liver was found to be uniformly enlarged, but the increase in size extended *upwards* and laterally only. No tenderness upon pressure over the region of the gall-ducts. Nothing in the history of the case that would indicate that gall-stones had ever been passed. Poorly defined *specific* history. Spleen considerably enlarged. Has never lived in a malarial district, or had malarial fever in any form. No abdominal tumor could be detected. There was no effusion into either pleural cavity. What was the cause of the enlargement of the liver, and what was the cause of the jaundice? The case was not a plain one.

SUBACUTE PLEURISY, WITH ALMOST COMPLETE ABSENCE OF RATIONAL SYMPTOMS.

The patient was a young man 20 years of age, who had worked in a printing-office *ten* hours a day. Had been sick five weeks. Taken with a chill, and was obliged to go to bed. Suffered no pain. Had cough which gradually increased, and about one week after his attack he expectorated a yellowish-looking material. Never expectorated blood or rusty sputa. *Never had a pain in the side.* This was the entire history of the case so far as rational symptoms were concerned. Physical examination revealed the fact that one pleural cavity was *two-thirds filled with fluid.* The fluid was disappearing rapidly under treatment, without the use of the aspirator. He was receiving tonics and good food.

It was remarked that there are two conditions in connection with subacute pleurisy in which the effusion is not likely to be absorbed. First, when a large amount of plastic material is poured out. Second, whenever the cavity is distended. In these conditions the absorbents are not in a condition to carry off the products of inflammation. In such cases the aspirator is of service.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, August 15, 1874.

HOSPITAL APPOINTMENTS.

THE resolutions adopted at a recent meeting of the Commissioners of Charities and Correction, which we publish in another column, will be read with interest by every one who has given the subject of hospital appointments any consideration. It is well known that the abuses connected with the old system of appointing members of the medical board have been very great. The gaining of a position has been, in fact, so much more a question of college or political influence, that it has been the exception rather than the rule for any professional man to be successful on the basis of merit alone. How the proposed changes in the appointments in Bellevue Hospital are calculated to correct the evils of which the profession as a body have so long complained, remains to be seen.

After the first of September the medical board is to consist of but eight members, who shall have the power of nominating thirty-three professional men of good reputation and ability, from which number the Commissioners shall select eleven additional members. The new board of eight is so constituted as to give no particular medical college any advantage, there being two members from each, while the other two are not representatives of any school. It is the declared intention of the Commissioners to maintain the ratio of the respective representation of professors and non-professors as already made in the new board.

While it is true that a great deal of political pressure has been brought to bear upon the appointing power, school influences have after all carried the day. Bellevue Hospital is not only a great field for practice, but offers the best means for clinical instruction to be found on this side of the Atlantic. It was perfectly natural for each medical college, by what has been technically called honest rivalry, to strive after the greatest number of positions for their respective clinical teachers. The struggle has always been a hard one, to adjust what each institution claimed to be its right; and very often, to preserve that harmony which is so proverbial among medical men who have only the interest of the profession at stake, many compromises had to be made which were hardly in keeping with the professional dignity of unselfish persons. The principle involved, of promoting the great cause of clinical teaching in our schools, was such a laudable one, that the profession at large at once signified its willingness to leave the whole matter in the hands of the professors, and few if any "outsiders" interfered in the struggle for position.

Keeping a virtuous eye upon this principle, and fighting manfully for its maintenance by the ordinary chances of luck and grace, one school gained the ascendency, whereupon the others, not believing in the "survival of the fittest," became discontented, and in retaliation rather ignominiously dropped the standard of principles and fought for men. The school which had gained the vantage ground had, however, committed itself too strongly to the grand issues of the contest to yield, and has nobly maintained its position in spite of all those who envied the number of its students, or its many clinical advantages.

The profession all the time took such an abiding interest in the exercise of this laudable and generous rivalry for the cause of science and the progress of clinical teaching, that it merely looked upon the successful school as the humble instrument of such grand results. We are, in fact, free to interpret this sentiment of the profession as a triumphant vindication of the importance of clinical teaching in all medical schools.

The Commissioners have now, however, determined to alter the condition of things so far as to give all the colleges equal rights, and let us hope that the great cause of clinical teaching will not suffer thereby. As far as the student is concerned, the same amount of clinical teaching will be dispensed; the only trouble that can possibly arise will be the lack of power and opportunity for any one college which may offer the greatest facilities for clinical teaching in the hospital to perform that part of its contract. The student who has a fancy to receive clinical instruction only from his professors will be the real sufferer. But some one must suffer when radical reforms are initiated, and why cannot the student take his share with the rest? If any greater wrongs are intended, we must console ourselves by shifting the responsibility of the changes upon the powers that willed them.

The provision which necessitates a division in classes of different periods of service is a wise one, and will tend to keep up a healthy rotation in office, at the same time obviating the necessity of compelling useless and fossilled members to resign.

Whenever any vacancy shall occur in the board, it shall be the duty to advertise the fact in the different

medical journals, so that all who may desire to become applicants may do so. We have repeatedly advised this measure as the one which would give the best possible chance for an honorable competition for a position. Heretofore every vacancy has been filled before its existence was generally known. Now every one will have an opportunity of putting in his respective claims in time to take the ordinary chances.

The rule that the service of each member of the medical board shall be continuous throughout the year will have a tendency to divide the labor equally, but will doubtless cause some inconvenience to those of our college teachers who only care to attend to their wards when the students are in town.

As a whole, the proposed changes are reasonably good ones, and the show of justice in making the appointments, leaving the nominations to the profession as represented in the new board, etc., entitles the new plan to our best wishes for its success.

CASES OF POISONING.

THE recent cases of poisoning in East 32d street, although stripped of the sensationalism which at first hung upon the possibility of poison in pickles, nevertheless carry with them a very suggestive and timely lesson. Two female servants and a male companion partake of pickles from a jar which had been left open, are all seized with the same symptoms of poisoning, and all die rather suddenly. On investigation by the coroner's jury it is found that real cause of death was the plentiful and accidental admixture of Paris green in the jar aforesaid, the pigment having been strewn upon the shelves of the closet for the purpose of destroying the cockroaches which infested the apartment. When we consider how frequently this particular article is used for this purpose, it is a wonder that a similar accident has not happened before. Those who use it for vermin hardly ever consider the possibility of being victimized themselves. Strychnine, arsenic, Paris green, and many other deadly poisons are used about our cupboards with a recklessness that is truly appalling, especially when we consider the many chances of having the poison season every article of food upon our table.

MR. ERICHSEN.—The Phila. *Med. Times* says that a letter has been received in that city which announces an expected visit of Mr. Erichsen to this country. He leaves England on the 30th of July, and after spending a few weeks in Canada, where he has friends and connections, will come to the United States. The *Med. Times* promises him, with good reason, a hearty reception by his professional brethren in this country.

PROF. JAMES P. WHITE, OF BUFFALO, N. Y.—At a stated meeting of the New York Academy of Medicine, Prof. James P. White, of Buffalo University, was unanimously elected an Honorary Fellow.

Reviews and Notices of Books.

THE PHYSICIAN'S DOSE AND SYMPTOM BOOK. By JOS. H. WYTHES, A.M., M.D. Eleventh edition, revised. Philadelphia: Lindsay & Blakiston.

THIS vade-mecum contains much useful information for the student and practitioner of medicine. The arrangement of its contents is such that if one desires to refresh the memory relative to doses of remedies and pharmaceutical preparations, he can do so satisfactorily without being obliged to consult more elaborate works. It is a sort of therapeutical remembrancer. Its value, however, might be very much enhanced if the author would carefully revise and correct the chapters containing an index of diseases and treatment, and also the chapter upon symptomatology. The measures recommended for adoption under the head of treatment are in many cases more antiquated than is necessary. The treatment of uræmia, apoplexy, uterine diseases, chronic nephritis, whooping-cough, and pneumonia, might be revised with profit.

If, under the head of symptomatology, the author believes that sibilant and sonorous râles are produced by "modified calibre of air-cells," of course he should stand to it; but if he knows the generally accepted opinion is opposed to the idea that they are produced in that manner, and it is that opinion which he wishes to present, those lines should undergo *another* revision. In the twelfth edition, revised, corrections will be looked for, which will add much to the value and appearance of this estimable little book.

LECTURES ON THE CLINICAL USES OF ELECTRICITY. By J. RUSSELL REYNOLDS, M.D., F.R.S. Second edition. Philadelphia: Lindsay & Blakiston.

THE acknowledged value of this little book has not been depreciated by the appearance of the second edition. The identity of the work is retained. The revision consists chiefly in the addition of such practical conclusions as have been arrived at by the author since the first edition was issued. The book itself is sufficiently elementary to be adapted to students' use, and sufficiently theoretical and practical to meet the wants of the average practitioner. It was not the design of the author to give an exhaustive treatise upon the subject of electricity as connected with medicine, and he has succeeded in retaining his writings within the bounds prescribed for them at the outset. At the beginning a salutary warning is given, both to students and practitioners; namely, do not over estimate the power of electricity in the diagnosis and treatment of disease.

It is well known that, to a very great extent at least, the use of electricity in the treatment of disease is empirical. Recitation of attenuated theories are therefore uninteresting to one who simply wishes a guide for its use. This book is a very good guide, in the application of electricity for diagnostic and therapeutic purposes, for those who are, either from lack of disposition or from lack of opportunity, ignorant regarding the method of its action or the theories relating thereto.

MANUAL OF TOXICOLOGY. By JOHN J. REESE, M.D. Published by J. B. Lippincott & Co. Philadelphia. 1874.

THIS is certainly a useful and practical book; its various chapters are systematically arranged, and the subject-matter generally well handled. The style is clear, and well adapted to instruct the student, and the

physician as well. It is a good book for reference in all matters where poison is to be demonstrated in medico-legal cases, and contains many useful and important hints and directions for this purpose. Some chapters are fuller and more exhaustively treated than others. Thus Chapter VI., on Compound Poisoning and Antagonism of Poisons, is quite imperfect; many antagonistic poisons are not mentioned at all. In the following chapters a résumé is given of information on the subject of poisoning already published before in some of the standard works on medical jurisprudence. The administration and action of toxic agents forms the better part of the book; but we regret it is not complete. We miss a description of many of these toxic agents, such as thallium, barium, iridium, argentum, rubidium, and others. He does not tell us anything of the action of irrespirable gases upon the human system, and the mode of detecting the action of such gases after death.

Dr. Reese ought to have boldly ventured out of the old trodden paths, and might have given to the world the results of spectral analytical research, which would have been a real desideratum. To ignore the diagnostical importance of spectral analytical examination, was, in our opinion, a great mistake, and we regret that he has thrown away a golden opportunity. This regret is so much more sincere, because we think the book has otherwise undeniable merits, and might have been made a standard work by furnishing to his readers the rich material accumulated and still unpublished upon this subject.

ON THE QUESTION OF THE TRANSMISSION OF SYPHILITIC CONTAGION IN THE RITE OF CIRCUMCISION. By R. W. TAYLOR, M.D., etc. New York: D. Appleton & Co. 1873.

THIS work embodies the facts ascertained, and the conclusions arrived at, in the author's investigation of four cases in which the Jewish rite of circumcision was followed by diseased manifestations very closely resembling, to say the least, those of syphilis.

The investigation was undertaken by Dr. Taylor at the request of the Board of Health, and we may here remark that sanitary boards would do well to adopt more generally, as was done in this instance, the course of committing inquiries of a special and unusual nature to those most competent to conduct them, even if they do not happen to occupy official positions.

Four Jewish children, previously healthy, were, after circumcision, attacked with ulcerations of the penis, followed by lesions of the skin and the lymphatic ganglia, and ending, in three of the four cases, in death from gradual exhaustion. Curiously enough, the surviving child was the only one of the four considered by Dr. Taylor as bearing satisfactory evidence of syphilis. In this child the circumcision wound healed kindly; but, at the end of two months, ulceration of the scar occurred, preceded by induration of the inguinal glands. It was considered probable, also, that the characteristic induration, which was observed to involve three-fourths of the whole line of incision, originated prior to the ulceration. Nine months after the circumcision the child was found to be in good general condition, but presenting a well-marked papular syphilide over the trunk, arms, and thighs, in the stage of decline. In each groin there was a sinus communicating with inflamed ganglia. The posterior cervical glands were enlarged. The condition of the epitrochlear glands was not ascertained. Three months later the papules had nearly disappeared, leaving small, slightly pigmented, desquamating spots, and had been replaced by a more pronounced rash on nearly the same sites. The child's general health continued good. Reasoning by analogy from the course of development of the initial lesion in children, in other portions of the body, Dr. Taylor concluded that in this case the syphilitic process, either by erosion, ulceration, or induration, developed itself within a fortnight after contagion.

In the three other children, ulceration of the circumcision scar occurred early, in one case destroying nearly the whole penis, and in the two others, followed by suppuration in the groins and elsewhere. In one of the cases eczema of the penis afterwards occurred, and in another, a syphilitic eruption was said to have shown itself, but details were not ascertained in regard to it.

Unable to look upon these three cases as syphilitic, Dr. Taylor passes in review the suggestions that they might have been due to chancroidal or diphtheritic contagion, which he considers not to be warranted by the facts, but rather inclines to attribute them, not to mere uncleanliness, but to a local tissue change, allied to the disease called *noma*, and due indirectly to uncleanliness.

The circumcisor was an aged Jew, who, while not a physician, or even a professed peritomist, appears to have often officiated on like occasions. It does not appear that in these cases he sucked the wound, as is often done among the lower class of Jews, but it seems probable that he squirted a styptic fluid upon it from his mouth, a practice little less hazardous. The old man submitted readily to the most searching examination of his person, and answered questions with perfect frankness and apparent truthfulness. Dr. Taylor found no evidence of his being syphilitic, particularly no lesions in his mouth. His instruments appeared cleanly and in good order; and he stated that it was not his custom to circumcise more than one child at a sitting, except in case of twins.

There was no evidence of syphilis having been subsequently engrafted on the first child, either by the libidinous conduct of a syphilitic female or by the application of soiled dressings or caustic.

Dr. Taylor considers that the trouble in these cases was due to the circumcision, notwithstanding the unusual duration of the period of incubation of the chancre in the first child; and while admitting the generally negative character of the conclusions arrived at, justly expresses his satisfaction at being able to make such an important addition to the scanty casuistics of inoculated infantile syphilis originating on the genitals.

Dr. Taylor sums up as follows:

1. That in the Jewish rite of circumcision there is a possibility of the occurrence of syphilis.

2. That the contagion is most likely to be communicated in the act of sucking the wound, the mouth containing a styptic liquid, and that, perhaps, it may occur by means of instruments soiled by syphilitic blood.

3. That the chances of such contagion are rendered greater by the performance of the operation by irresponsible, non-professional persons.

4. That the operation of sucking should be wholly abolished; and that, if a styptic solution of any kind is used, it should be poured from a vessel on the wound, rather than squirted upon it from the mouth of the operator.

5. That in no instance should two or more children be thus operated on consecutively without a thorough cleansing of the instruments and utensils used after each operation, and that in every instance the greatest care should be taken in cleansing the instruments.

6. That the performance of the rite should be absolutely confined to responsible and educated persons—either a physician alone being selected, or a physician assisting an officiating rabbi, or a circumcisor of recognized merit.

7. That, under these circumstances, accidents of any kind are reduced to a minimum.

THE MEDICAL REGISTER OF NEW YORK, NEW JERSEY, AND CONNECTICUT, FOR THE YEAR COMMENCING JUNE 1, 1874. Published under the Supervision of the New York Historical Society. ALFRED E. M. PURDY, M.D., Editor. New York: W. Wood & Co. 1874. 12mo, pp. 402.

EACH year, as this annual makes its way to our table, we congratulate ourselves on its continued success. The present volume (xii.) is equal in all respects to its predecessors. This is saying all we can for its excellence; in fact we are, after a careful perusal of its contents, unable to offer any suggestions to improve its present indispensability. It contains everything necessary to make it a complete medical directory of the profession of New York and vicinity.

EMERGENCIES, AND HOW TO TREAT THEM. The Etiology, Pathology, and Treatment of the Accidents, Diseases, and Cases of Poisoning which demand prompt Action. Designed for students and practitioners. By JOSEPH W. HOWE, M.D., Clin. Prof. Surg. Med. Dept. Univ. of New York. Second Edition. New York: D. Appleton & Co., 1874.

THE second edition of this work is, as far as we can see, a reprint of the former edition, and needs no other notice than that which we have given it on a previous occasion. We need only to reiterate our former opinion that it is a useful, instructive work. We are glad to notice the fact that the demand for a second edition, so soon after the first, bears out this opinion.

ELECTRO-THERAPEUTICS; A CONDENSED MANUAL OF MEDICAL ELECTRICITY. By D. F. LINCOLN, M.D. Pp. 186. Philadelphia: H. C. Lea. 1874.

WE have had so many small books upon Medical Electricity of late, that when we opened the little volume from Dr. Lincoln we expected to find something new; but we were disappointed. The title "Electro-Therapeutics," which by the way is plagiarized from that of the work of Dr. A. McL. Hamilton, of this city, prefaces one of the best compilations for general use, and shows a familiarity on the part of Dr. Lincoln with the European authors.

While fully aware of the good points of the book, we must differ from the author in some of his statements, and excuse them upon the ground of undue haste. On page 68 we are told that "*tenderness* of the sympathetic nerve is to be noticed as a symptom." The author lays great stress upon galvanization of the brain, although its feasibility is denied by Cyon, Mason, and other writers. It is needless to refer to their arguments, except to add that Dr. Lincoln and the adherents of this theory probably forget that an electric current is always carried by the best conductors, and the bones of the cranium, as well as all other bony tissues, being exceedingly bad conductors, it is but logical to suppose that the pericranial fascia will conduct the current, and that none will pass through the brain. On page 121 he advances the somewhat fanciful statement that "a galvanic current passed through the spinal cord refreshes some persons like a stimulating bath."

The chapter on physiology is good, and the section upon therapeutics, though somewhat confused in its arrangement, shows hard work.

The illustrations, confined to the exhibition of a great many different kinds of batteries and apparatus, are clear and well drawn.

Reports of Societies.

NEW YORK MEDICAL LIBRARY AND JOURNAL ASSOCIATION.

DR. J. C. PETERS, PRESIDENT, in the Chair.

EXSECTION OF THE HIP-JOINT.

DR. LEWIS A. SAYRE read a paper before this Association on Exsection of the Hip-joint. The following is a synopsis of his remarks:

The operation for exsection of the hip-joint was proposed by Mr. Anthony White, in the year 1769. It was first performed by Mr. Charles White, in the year 1821. In my first paper upon "Exsection of the Hip-joint," I stated that the operation was first performed in 1818. Dr. Hodges has stated, in a work written subsequent to the reading of that paper, that the operation was first performed in the year 1822. If, however, you will refer to Reese's edition of Cooper's Surgery, with supplementary index, for 1845. pp. 49 and 50, you will find a letter from Anthony White, written in April, 1821, giving a complete history of his case and the operation. The letter concludes as follows: "In April, 1821, we met, and the boy being placed upon a table of convenient height, I proceeded to divide the integuments covering the bone, carrying the incision from an inch above the head directly along the middle line of the bone, about two inches below the greater trochanter; this was completed at one incision down to the surface of the bone." Three or four cases had been reported previous to that date, in which the head of the bone (exfoliation having taken place) had been removed after dilating the fistulous openings which led to it; but that was not, properly speaking, an "exsection of the hip-joint," and should not be regarded as such. The operation was subsequently performed in the years 1829, '32, '33, '45, and '47, by various surgeons in England and France. In the year 1852 the operation was performed in this country by Bigelow, of Boston, but was unsuccessful.

I performed my first operation for exsection of the hip-joint March 29th, 1854. It was the first time the operation had been performed successfully in this country.

The little patient was the daughter of an engineer, and was at the time of the operation in the most extreme condition of emaciation and suffering. All hope of her recovery had been abandoned, unless there was some help for her in this direction.

Somewhat more than a year before the operation was performed, the case had fallen under my observation. I then called what was regarded as the most eminent surgical counsel in this city, and although at that time I was desirous of performing the operation, counsel decided that the operation was improper, and accordingly it was discountenanced and deferred.

The father of the child was very anxious that something should be done, and I gave him my ideas upon the subject, somewhat as follows: I had asked him the question, knowing that he was an engineer, if his cellar was filled with decaying potatoes and bilge-water, how he would proceed to remove them? Would he cut a drain direct to the offensive accumulation and remove it at once; or would he cut a drain running around three or four squares, down to the City Hall and up

on the east side to his cellar, and in that manner secure only a partial and slow discharge of the offensive accumulation? His reply was that he would cut a drain direct from his cellar to the East River, in order to give direct and rapid escape to the foul material within.

At the end of little more than a year, as already stated, the father came and said that he wanted me to perform the operation. He said "that decaying-potato and impure-water business had been upon his mind ever since I had first suggested it to him." He also said that it was evident his daughter would soon die unless relief from some source could be obtained. The operation therefore was performed, as the *dernier ressort* for saving the girl's life. The result of that operation, gentlemen, you now have before you. The girl recovered, has grown into womanhood, and now enjoys the most perfect health.

So much for the first case. The results obtained in operations since that time I will mention further on.

I will now direct your attention to the nature of the disease and the indications for the performance of the operation.

With regard to the nature of the disease, I am fully convinced that in an immense majority of instances it is of traumatic origin. At one time I spoke upon this point with some hesitation. It was held by the profession in general, and I had been taught to regard the disease, as being essentially one of a constitutional character; and that it occurred in a great majority of cases, if not always, in persons who were of a strumous habit.

After several years of careful investigation, I have arrived at the conclusion that attributing this form of disease exclusively to a constitutional origin is erroneous teaching.

The very fact that so many of those patients who, perhaps, have been sick for years, finally recover under nature's operation, and are daily seen about the streets, is of itself sufficient evidence to disprove the doctrine of exclusive constitutional origin. I am fully convinced, as already stated, that in a vast majority of instances the disease has a traumatic origin.

The child receives a strain, a blow, a concussion, some injury which causes pressure upon the blood-vessels of the head of the femur or acetabulum, etc., etc.

It is something of that order which excites inflammatory action that goes on to the production of effects which we see developed during the progress of the disease. It seems to me it is just here that there has been this fatal error with regard to the propriety of the operation; namely, the almost universal belief that the disease is essentially constitutional in its nature. This belief has formed a sort of Chinese wall, which has prevented a correct understanding and appreciation of the nature of the difficulty, and the proper treatment to be adopted for its relief. Taking this view of the question, the treatment of these cases by adopting constitutional measures *alone*, administering remedies for the purpose of rectifying a local injury, is in my opinion entirely wrong, and the results obtained by that form of treatment prove it to be so.

The position, therefore, which I assume is this: if the disease is recognized early, it can by appropriate treatment, such as extension and counter-extension, properly applied and continued, perhaps assisted by some form of moderate counter-irritation, perhaps by the application of leeches, be brought to a favorable termination without any operation at all.

It is proper at this point to say that those forms of counter-irritation which are sometimes resorted to for the purpose of keeping up a continuous discharge, such as setons, etc., I do not approve of. The actual cautery is a most excellent and serviceable form of counter-irritation, and the form which I usually employ unless there are some special objections to its use.

When, however, the disease has so far advanced that the case falls under any of the indications which are to be enumerated, then it is that I regard the operation not only as justifiable, but I regard it as the duty of the surgeon to perform it if possible.

Before adopting any plan of treatment, however, it is essential to arrive at a correct diagnosis. For this end, proper position of the patient is absolutely necessary during the examination.

The proper position is upon the back, upon a hard table, with the spinous processes touching the table. Placed in this position, if the pelvis, trunk, and extremities are in a normal relation to each other, two lines, one drawn from the centre of the sternum to the centre of the symphysis pubis, and the other drawn from the anterior superior spinous process of one ilium to that of the other, will cross each other at right angles, and the extremities can be brought into a position of parallelism with each other, and the popliteal spaces will touch the table.

In the first stage of the disease, the limb is slightly abducted, slightly flexed, the foot is rotated outwards, and the toes are slightly everted.

In the second stage, the same symptoms are present, except that they are considerably increased. There is increased flexion, abduction, eversion of the toes, and rotation of the foot outwards. These symptoms are present after suppuration or extensive effusion has occurred within the joint, and are due to the fact that the pressure upon the inside of the capsule has caused it to unfold itself, as it were, compelling the limb to assume this peculiar position to accommodate the increased amount of fluid within the joint. This is the most painful period of the disease, and continues so until rupture of the capsule occurs.

When rupture of the capsule takes place, the real deformity incident to the third stage of the disease begins to be developed. In this stage the limb is adducted, the foot is rotated inwards, the toes are inverted, and the limb becomes shorter.

It is generally taught that luxation occurs in this stage; but I have seen only a single instance among all the cases upon which I have operated, in which luxation has been present. The head of the bone is *diminished* in size by the process of absorption, and the acetabulum is *increased* in size, which permits of considerable displacement. It is also true that when the acetabulum becomes very much absorbed, the capsule and the periosteum become displaced, and the head of the bone is invested with its capsule in a new position upon the ilium.

These changes may take place through the process of absorption, but as a rule there is no proper luxation.

When the disease has passed into the third stage, the case must be cured, if cured at all, either by the operation of exsection, or by nature's method.

If nature is left to cure the case without assistance, excessive suppuration must occur, and frequently patients die from the exhaustion incident to it.

The deformity which remains when nature effects a cure, is one with which all are familiar.

This brings us to the consideration of the indications for the performance of the operation.

1. If there is denuded bone present, the operation is justifiable.

2. If the discharge is excessive, and is increasing, the operation is justifiable.

If the discharge is diminishing, and the patient is improving in health, the case may perhaps be left to get well by nature's method.

3. If there is danger of perforation of the ilium, the operation is justifiable. This point can be settled by rectal examination. A spongy feel or sense of fluctuation can be detected as the finger passes over the plane of the ischium if perforation is threatened. In such cases it is better to operate than to run the risk of having perforation occur.

This brings us to the operation itself, which is to be performed as follows: Anæsthetize, and place the patient upon the well side. Carry the point of a strong knife home to the bone at a point midway between the anterior superior spinous process of the ilium and the top of the trochanter major. Holding the knife firmly upon the bone, carry it through the tissues in a slightly curved direction, to a point midway between the centre of the trochanter and its posterior border, and then continue the incision from two to three inches farther down upon the thigh, curving it slightly forward. Cut through the periosteum freely. Make a second incision through the periosteum at right angles with the first, extending as far around the bone as can be conveniently reached, at a point nearly opposite the lesser trochanter. Introduce the elevator, and peel up the periosteum, until it is reflected, to the digital fossa, at which point it will be necessary to cut the muscular attachments. Continue the reflection of the periosteum until the bone can be turned out sufficiently far to permit the introduction of a narrow saw (a saw is always to be used), and then remove the bone below the trochanter major. More of the bone must be removed if found diseased below this point. It is better to remove the trochanter major even though it be not diseased, because, if left, it will obstruct free discharge of pus. If the disease has been of long standing, and nature has formed a large amount of involucrum, it may be necessary to first saw the bone off before it can be turned out.

It has happened to me in two cases that another difficulty has been met with regard to turning the bone out before sawing it off. The acetabulum in these cases had been perforated, and a portion of the femur had become engaged in the opening. Fixed in this manner, the acetabulum offered so much resistance that, in both instances, the femur was fractured by the force used for luxating the bone.

All dead bone is next to be carefully removed from the acetabulum, taking great care not to injure the internal periosteum.

Wash out the wound, pour it full of Peruvian balsam, tampon with oakum in such a manner as to permit a perfectly free discharge from the bottom of the acetabulum, apply one or two sutures, and then dress the child in the *wire-cuirass*, which is a modification of Brower's wire breeches. Never tampon the wound with cotton, for I feel certain that one of my cases was killed by accidentally having it used.

The application of an India-rubber bed to the cuirass adds very much to the comfort of the patient. The well limb is to be dressed first, and made a solid column upon which to make counter-extension for the diseased limb.

Place the anus of the child in proper relation with the opening in the cuirass. Extend the well limb and fasten the foot to the foot-piece by means of a roller bandage. Place a moderate splint, such as a folded newspaper or piece of soft pasteboard, over the knee to prevent flexion. Carefully secure the whole with the remainder of the roller bandage, which is to pass over the entire limb and perinæum. Apply the bandage with great care, in order to avoid wrinkles and undue pressure. The requisite amount of extension is made by means of the thumb-screws attached to the foot-piece.

The foot of the diseased limb is to be fastened to the foot-piece by means of broad strips of adhesive plaster, which extend along the sides of the leg and reach *above* the knee, in order that traction shall *not* be made upon the lateral ligament of the knee-joint, but upon the thigh. The plaster is secured to the limb by means of a roller bandage applied in such manner that all wrinkles in the plaster shall be avoided. Extension to the diseased limb must be *gradually* applied.

The tissues about the wound should be firmly supported with a bandage for the purpose of preventing infiltration of pus. The first dressing of the wound may be made at the end of forty-eight hours. Subsequently the dressing may be repeated according to the amount of discharge, etc. In the subsequent dressings it is important to keep the periosteum well stuffed with oakum in order to permit the deposit of sufficient bony material to finally bear the weight of the body. The well limb must be undressed at least once a week, free motion restored to the joints by passive movements, and then replaced in the cuirass.

If the wire-cuirass cannot be easily obtained, a long Haggerdon's splint may be employed, with the modification of adding a foot-board.

It is possible to treat a case upon a firm bed, making extension by means of a weight and pulley. This, however, necessitates continued confinement of the patient, which is undesirable, if it can be avoided.

The children are kept in the wire-cuirass, as a general rule, about six weeks.

At the end of this time the short splint which I have devised is applied, and the child permitted to go about with the assistance of a crutch.

If the thigh is so short that this splint cannot be advantageously applied, Taylor's long splint may be employed, or a modification of that splint which you will see in position upon one patient here to-night.

The modification which I have introduced is securing an abduction movement and rotation outwards at the same time, by means of screws adjusted to the joint in the instrument opposite the hip-joint.

Several cases were then presented.

CASE I.—At the time of the operation there was extensive abscess on the left hip, disease of the opposite knee-joint; acetabulum was perforated; a probe could be carried through and emerge at the root of the penis. Recovery with motion perfect, and three-quarters of an inch shortening. The wound closed in about nine months after the operation.

CASE II.—Little child operated upon a few weeks previous, and was dressed in the wire-cuirass.

CASE III.—Little girl wearing an instrument which is a modification of Taylor's long splint. The case was one of fibrous anchylosis. Since the use of the instrument abduction had been obtained sufficient to more than bring the limbs parallel; rotation could be obtained, and flexion and extension to some extent.

CASE IV.—Extensive waxy degeneration of liver and kidneys. Operation performed for temporary relief. Very great improvement had been realized.

Two cases of cure by nature's method were presented, to afford opportunity for comparison.

One most remarkable case was presented which well illustrated the value of one item of after-treatment. The more care and attention the patient receives after the operation, the better will be the results obtained.

The movements of this young man were so perfect

that it was impossible to determine by those alone which hip had been operated upon. In all the cases presented motion at the hip-joint was perfect; the patients were able to sit down with perfect ease, and to abduct the limbs far enough to ride on horseback.

The whole number of cases presented was thirteen.

Since my first operation I have operated forty-four times, of which I have complete histories. An analysis of these cases is given below. The results which have been obtained have been obtained upon cases taken indiscriminately. The percentage of mortality is so small, I am compelled to believe that the operation is not only *justifiable*, but, if the cases could be selected and the operation performed at the most proper time, there is much better prospect of obtaining good results.

I am aware that the operation is disapproved of by many surgeons. In some institutions in this city it is absolutely prohibited. At the same time, however, in one of these institutions the operation for necrosis of the upper extremity of the femur is performed, and during the operation the head of the femur is removed. Still, they do not admit of the feasibility of the operation of exsection. That is what I call "whipping—*him* around a stump."

Analysis of 44 cases of exsection of the hip-joint. Males 28, Females 16.

The acetabulum was perforated in 30 cases.

The disease could be traced to traumatic causes in 36 cases.

TABLE.

Age of Patient.	No. of Cases.	Died before wound healed.	Recovered.
Under 5 years.....	8	1	7
Between 5 and 10 yrs.	19	2	17
" 10 and 15 yrs.	13	5	8
" 15 and 20 yrs.	2	2	
" 20 and 30 yrs.	1	1	
" 30 and 50 yrs.	1		1
Total.....	44	11	33

Of the thirty-three cases which recovered, all are now living except two.

One of those died of marasmus and cholera-infantum six months after the wound had healed, and two years and 70 days after the operation.

The other died of phthisis two years after the operation. The wound had been healed more than a year.

The following is a record:

Of the 11 cases which died before the wound healed—under 5 years of age: one died of dysentery two weeks after the operation.

Between 5 and 10 years: one died of exhaustion in two weeks, and one died of exhaustion on the 24th day after the operation.

Between 10 and 15 years: one died of exhaustion on the 8th day; one died from tetanus on the 15th day; one died on the 14th day of double pneumonia; one died at the end of 9 months, of exhaustion, six inches of the shaft of the femur having been removed at a second operation; and one died at the end of 17 months, of dysentery. In this case, at the time of death there was limited motion, and only a very slight discharge from two sinuses at the back of the thigh.

Between 15 and 20 years: one died on the 40th day after the operation, of sunstroke. Wound nearly healed. One died at the end of three weeks, of amyloid degeneration of the kidneys.

Between 20 and 30 years: one died at the end of 11 months, from fatty degeneration of the liver and kidneys. Wound nearly healed. Three inches of new bone had formed.

The cases now under observation, upon which the operation has been performed, are certain to recover, with a single exception.

In the case in which a second operation was performed and six inches of the femur removed, my present opinion is, that amputation at the hip-joint would have been much the more favorable operation.*

The paper being open to discussion, DR. C. FAYETTE TAYLOR remarked as follows:

The *abduction* modification of my long splint, which Dr. Sayre claims, I have employed for the past ten years. I first recorded it in THE MEDICAL RECORD, in September, 1867. I have what is called an *abduction attachment*, which is applied to the long splint, but only in those cases in which it is necessary.

The screw for producing rotation I do not claim.

With regard to the nature of this disease, I fully agree with Dr. Sayre that it is essentially traumatic. I have found that, in private practice, 75 per cent. of the cases can be traced directly to injury. In dispensary practice, about 53 per cent. have a fair history of injury. Of course, in strumous cases, a slighter injury will produce the same effect that a more severe one will in a healthy constitution; but that it is a traumatic disease essentially, and that there are but few cases which originate without traumatic causes, I am fully convinced.

I have never performed the operation of exsection of the hip-joint, but I do not hesitate to say that the procedure is often justifiable. I am of the opinion, however, that cases do not occur so often which require the operation as might be supposed.

The amount of amelioration which can be given to a case of hip-joint disease is very great. I have been looking for a case for some time upon which to perform the operation, but out of 167 cases, 41 of which were private patients, I have not met a case which seemed to justify the procedure. None of those cases terminated fatally; consequently it may be fairly assumed that we did not neglect our duty.

Dr. Shaffer, who has also been desirous of obtaining a case proper for operation, has had under his observation cases sufficient in number to increase my own number to 200. Among all these cases there was one in which the operation for exsection seemed justifiable. The operation was performed, and the patient did very well. It was in only one-half of one per cent., then, of the cases which fell under our observation where the operation was thought to be proper. As the other cases did well, there would hardly be a question as to whether the operation should have been performed. While I do not doubt that there are cases where the operation would save life, it is much better to cure without the operation.

DR. YALE remarked with regard to Dr. Taylor's suggestion concerning the relative frequency with which the operation should be performed, that it should be borne in mind that the frequency is in inverse proportion to the early treatment. In those cases where treatment can be adopted at the outset or the early stage

* Since the reading of the paper, the forty-third case, the one referred to above, has died at the end of the eleventh week after the operation. The specimen was presented at the New York Pathological Society, April 8th, 1874. The patient was 10 years of age. The acetabulum had become covered with new material, and four inches of dead bone at the upper extremity of the femur had been surrounded by a heavy involucrum, which had been rounded off at its upper extremity so as to fit the acetabulum in the most perfect manner.

of the disease, it can be cured without an operation. But there are very many cases which are treated for other diseases, until the time when such early treatment will be of service has been expended; until abscesses are developed, and the true nature of the disease has been determined. In such cases as these, which have been neglected in their early stages, and gone on to the formation of abscesses and destruction of the bones, etc., the problem is, Shall we cut short the disease by means of an operation, or shall we permit them to die? Shall we diminish the deformity and give them useful limbs, or shall we permit the work to be accomplished by nature, if indeed she proves herself able, and have remaining a very great deformity, and a very much less useful limb? The first inclination of the surgeon may be to say that the patient will die anyhow, and he therefore feels like permitting him to die peaceably. My experience and observation, however, have taught me that it is not altogether untrue that the *worst* cases do the *best*, and it is in this class of bad cases that an immense amount of benefit can be *derived* by an operation. It is in that large number of cases which by want of money have been deprived of the benefits of proper surgical attention, and thus the disease has been permitted to go on to its most advanced stages; or, what is much more common, the natural discouragement which the parents have because the disease is not cured at once, hence fail to carry out the treatment necessary to give any benefit in the early stage, consequently neglect treatment altogether until irreparable damage is done—it is in such cases as these that the operation is pre-eminently beneficial. I believe that the so-called "American plan of treatment" is better than all others for securing good results in this class of cases. Most of us may live to see the time when these crooked cases will have disappeared from among us, because of the benefits which may be afforded by early treatment. It has probably been Dr. Taylor's fortune to meet with that class of cases in which operation was contra-indicated; but I am of the opinion that, in the field of observation in which I have been engaged, I have seen at least from 25 to 50 cases in which the operation would have been justifiable.

Dr. Post being called upon, remarked that when the lion roared it was becoming for the other beasts of the field to remain silent. There was, in his mind, however, no question but that in properly selected cases the operation is a justifiable one; and not only that, but that it is the duty of the surgeon to perform it. In many cases the operation is necessary to save life. Where better results can be secured by the operation than by permitting the case to be cured by nature, even though life would be preserved without it, the operation is justifiable. In the cases where nature is successful in removing the dead bone, the tendency to deformity is so great that in very many instances the limb is almost useless. In all the cases in which he had performed the operation, the results obtained had been very satisfactory. He then referred to the history of several cases, and in the course of his remarks alluded to the actual cautery as a very serviceable means to be employed in the treatment of hip-joint disease.

Dr. Sayre remarked that he wished to be understood as saying that with proper treatment of the disease at the beginning, we shall never be compelled to resort to the operation of exsection. With the improved methods of treatment which we now have, the operation may become obsolete. It is in cases where the disease is progressing, even under the best treatment, showing no symptoms of improvement, that the operation is especially beneficial, and is justifiable.

Correspondence.

NEW DISCOVERIES IN HYDROPHOBIA.

Pine Ridge Papers.

II.

Since I last wrote I have had an opportunity of performing an autopsy upon one of the dogs under observation. The patient was a Scotch terrier of an erratic temperament, and, except for the slight eccentricity of nipping any one who might be passing him in the dark, he had a quiet disposition. My attention was first directed to the possibilityof his having hydrophobia, by the fact that one day on entering my stable I caught him chewing a portion of the leg of my pants with evident relish. Withdrawing my leg he still persisted in his hold, pulled and shook his head as if with a determination to tear out that portion of the fabric for a vicarious meal. During all this performance there was a marked twitching of the tail and a peculiar expression to the eye, half significant and half determined, which reminded me of one of the pathognomonic symptoms of emotional insanity. As the animal had not yet inserted his teeth into my skin, I felt composed, and had an abundance of opportunity to study the symptoms with the requisite care to make a correct diagnosis. During the whole time that his jaws were clinched, the spasmodic action of the tail continued at regular intervals, proving that the disease is a purely nervous affection. If we accept such a view, and are able to make out the nervous connection between the muscles of the jaw and those of the tail, I think we can very satisfactorily explain the reason why the tail is drawn so tightly between the legs when the masseter muscles are relaxed in the last stages of the disease. I only throw out this suggestion because, in all my reading upon the subject, I have never met with a similar observation; hence, I am glad of this opportunity to place it on record. Inserting the bulb of the thermometer into the left ear, the animal bent his body laterally in the opposite direction, and for a moment seemed to have a tonic spasm, clearly proving that the power of reflex action still remained.

Having thoroughly satisfied myself that the animal had hydrophobia, I caused my attendant to pass a collar around the dog's neck and fasten thereto a chain. The collar was of leather, one inch and five-eighths wide by $\frac{1}{8}$ of an inch in thickness, and provided with a large stout buckle. The chain was the ordinary one "sold in our shops." During the operation of ligating the neck, and in order to prevent my attendant from being bitten, I engaged the dog's attention by a to and fro motion of my leg, thus increasing his hold. This I have found, by an experience in one hundred and fifty-two similar cases, to be very effectual, provided the animal's teeth have not already entered the flesh.

After being conducted to the kennel and secured, the attendant had a narrow escape. While in the stooping posture, pouring some water from a pail into a smaller vessel, the dog leaped and snapped at his buttocks, and just missed the skin. By a timely jump, no other injury than a loss of a portion of the pants was suffered. Immediately on being released the attendant gave the dog a smart kick in the perineum, when the animal uttered a short yelp, retired to the corner, and had an abundant evacuation from the

bowels, at the same time urinating freely. This may have only been a coincidence, but I refer to the circumstance to show that the sphincters were in good condition, and that the posterior extremities were not paralyzed.

I may state, in passing, that this animal was kept under constant observation, as are all my other dog patients, night and day, each watcher being relieved every two hours. The enclosure is abundantly shaded by trees, each kennel is supplied with a curled-hair mattress, a urinal, earth-closet, and a special drain for subsoil moisture. Besides this, each patient is regularly supplied with ice-water, by direction of the Society for the Prevention of Cruelty to Animals. I mention these facts to show the facilities I have for treating these cases.

Well, to make a long story short, the patient met a violent death by attempting to climb over his kennel, with a short chain, and falling on the wrong side.

Before proceeding further, I may state that the portions of pants that were lacerated by the dog's teeth were carefully cut out for purposes of analysis. I shall confine myself to a description of that portion removed from my own person. Examined with the naked eye, there were six distinct perforations by the animal's teeth, and one tear an inch long, slightly smeared with saliva. No blood visible. Examined under the microscope, the damp portions of the cloth were found to consist of a glairy mucus with a mixture of salivary corpuscles, which were mostly congregated around the perforations. Besides this, there were numerous granules, spindle-shaped cells, fibres, oil globules (high refraction power with a short focus), the whole mixed in a confused stroma of woollen fibre. Except for the oil globules and granules, the microscopic examination was negative. The fabric being treated with dilute acetic acid, gave rise to effervescence, due to the accidental presence of some whitewash. A drop of concentrated sulphuric acid gave rise to a momentarily brilliant red stain, followed by a marked and immediate loss of substance. Except for the character of the stain, the same may be said for nitric acid tried in a similar manner. Examined again under the microscope with a high power, oil globules and granules still existed in great quantity, with broken-down woollen tissue. With the view of obtaining some extractive matter, the fabric was then digested in a retort heated to redness. The cloth quickly curled upon itself, became crisp, and gave forth a characteristic odor of burnt wool. Nothing but ashes left in the retort. (This I intend to send to a young medical student, a friend of mine, who is taking a practical course in a laboratory.)

Now we shall proceed to the most interesting part of the autopsy. Cadaveric rigidity marked. Froth oozing from the mouth; abdomen tympanitic; eyes congested; mark of cord around the neck; marked turgidity of vessels of the hemispheres and effusion in the arachnoid. Aside from the ordinary lesions of suffocation, I noticed a punctate injection in the left optic thalmus, an embolus in the middle meningeal artery, a thrombosis of the left lateral sinus, and a small clot quietly undergoing fatty degeneration in the left lateral ventricle. At the point where the spinal cord was separated at the autopsy, there was a marked laceration. The corpus striatum was intact.

The larynx was filled with mucus, which I intend to analyze and report upon. The brain of the animal was at once placed on ice, to prepare it for microscopic examination.

* * *

PINE RIDGE, ON THE HUDSON.

New Instruments.

FOR THE ARREST OF EPISTAXIS.

BY SALVATORE CARO, M.D.,

NEW YORK.

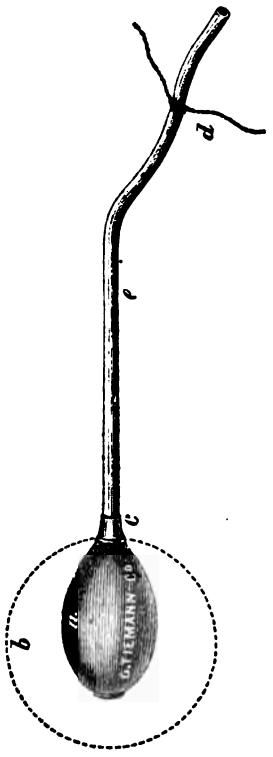
IF the epistaxis prove obstinate, endangering the life of the patient, it is always proper to resort to mechanical means for its arrest, by plugging the nose posteriorly with Zurnoff's sound or Bellocque's canula, and anteriorly with sponges, bits of linen, or patent lints. The india-rubber bag is the last and best instrument for this purpose. My preference is for anterior plugging, for the following reasons:

I. The alarm created by the paraphernalia and difficulty of drawing the plug into the posterior nose is generally very great.

II. The inflammation caused by the pressure upon the delicate parts, and the consequent profuse suppuration and poisoning of the system by the absorption of putrid matter.

III. The uncertainty of arresting the hemorrhage by the unequal pressure, and the increasing danger of its renewal by tearing the newly formed membrane; and

IV. The blood having its free exit intercepted, finds its way into the cranial cavity, and may cause tetanic convulsions and death by pressure upon the encephalic mass.



a. Natural size of the bag.
b. Line of the inflated bag.
c. Insertion of the non-elastic tube.
d. Silk thread to tie the tube after inflation.
e. Natural size and length of the non-elastic tubing.

The india-rubber bag to which I have reference is the one shown and described in the diagram.

Dr. Luigi Malavasi, of Modena, in 1843, gave us the first knowledge of this instrument, and in 1871 Dr. Küchenmeister, of Dresden, perfected it. But the last change which I have made is, I think, an improvement upon the latter. This consists simply in the change of tubing from elastic to non-elastic. By this alteration a firmer traction can be made upon the bag, and more easily adjusted, and by the help of an elastic bougie can be readily passed from the anterior to the posterior fossa, and when *in situ* can be inflated with iced water or air. The tube is tied with strong silk, and by gently pulling the tubing the bag will adjust itself upon the bleeding parts and arrest the hemorrhage. If the epistaxis should continue, the bag, without removal, can be collapsed and afterwards reinflated so as to form a stronger pressure.

If offensive suppuration should cause distress, by

collapsing the bag the nose can be washed with any detergent, and the danger of the absorption of deleterious matter removed. My first experience in its use was in April, 1873, in the cases of two boys, both suffering from severe epistaxis, one caused by a fall down stairs, the other by a blow whilst playing ball. Local remedies and external pressure proving unsuccessful, the india-rubber bag immediately arrested the hemorrhage, without giving the slightest inconvenience, as testified by the boys.

A NEW HYPODERMIC SYRINGE.

By GEO. R. FOWLER, M.D.,

BROOKLYN, N. Y.

Every physician who uses a hypodermic syringe has experienced the many inconveniences attending the use of the old pattern. When not often used, the leather packing upon the piston becomes dry, and some time is consumed, in perhaps an emergency, in getting the syringe to work. The points frequently become occluded, and the wires used to prevent this, when the syringe is not in use, often become fastened tightly in the point, breaking off when attempts are made to disengage them, thus adding to the physician's annoyance. As now made by the instrument-makers, they are put up in leather-covered cases, which, under the influence of moisture from the perspiration when carried in the pocket, soon wear out and fall to pieces.

Then there is the inconvenience of carrying the solution in the old way. The cork of the vial contained in the case frequently becomes loosened, and the solution of morphia, which of course is the one most frequently employed, evaporates, and the crystals are deposited about the cork, gluing it so effectually to the glass as to leave no alternative but to break the bottle in order to get at the contents.

FIG. 1.

Some time ago I conceived the idea of doing away with the case and vial, and attaching a reservoir to the end of the syringe, to which latter a point was permanently fixed. The accompanying cuts represent the instrument.

Fig. 1, at "a," shows the syringe, with an aluminum point permanently fixed; "b," the reservoir made of hard rubber, containing the solution, and having the lower end (as shown by the milled edge) removable, so that the reservoir may be filled without detaching the syringe; "c," the case, also of hard rubber, for the syringe. The whole instrument when complete, as represented at Fig. 2, is compact, and occupies but little more space than the ordinary hard rubber thermometer case.

FIG. 2.

To use the syringe, the case "c" (Fig. 1) is unscrewed and removed, and the solution drawn into the barrel to the desired amount, *without detaching the reservoir.* Then unscrew the reservoir, and the instrument is ready for use.

The leather packing is constantly kept moist and ready for use by a small portion of the solution passing to it through the point by capillary attraction. The point being of aluminum will never corrode, however acid the solution employed.

The morphia solution which I have been in the habit of employing for the past two years possesses the advantage of keeping, when properly made, unchanged for an indefinite length of time. The following is the formula:

℞. Morph. sulph.....gr. xvi.
Aquæ dest. ebullient,... ʒ vi.
Acidi sul. dil.....ℳ ii.
Misce et adde,
Acidi carbol.....gr. v.
Glycerinæ puræ.....ʒ ii.

Again boil and filter carefully.

The above solution may be carried in the reservoir of this syringe any length of time without change.

A word as to the method employed by most physicians in giving a hypodermic injection. It is done by pinching up a fold of skin and thrusting the point of the syringe into this. This, I think, is very objectionable. By it all anatomical relations of the skin to the superficial veins are destroyed, and the danger of injecting into one of these increased. This accident has happened to me on two different occasions, and I never wish to witness such terrible suffering again. Both of these recovered, but the accident suggested to me the following method: instead of pinching up a fold of skin, draw the skin tightly over the subjacent cellular tissue at the point at which the injection is to be given. Then hold the syringe at right angles to the long axis of the limb or part, and press the whole length of the point firmly against the surface of the skin. This forms a furrow, one terminus of which is at the sharpened point of the syringe. The instrument is now thrust quickly forward, when it will be found to have entered the subcutaneous cellular tissue by the absence of resistance. This I have found to be the most certain, safe, and painless method of introducing the point.

AN IMPROMPTU ASPIRATOR.

By ANDREW H. SMITH, M.D.,

OF NEW YORK.

As the aspirator in general use is always expensive, and often not at hand, a substitute which may be arranged from the material at the command of almost every practitioner, will often be found useful.

Take a common pint bottle, fit it with a good firm cork, pierce the cork with a rat-tail file, and fit into it a piece of glass tube about three inches long, leaving about an inch projecting above the cork.

A hollow needle of appropriate size, attached to a piece of rubber tubing about two feet in length, completes the apparatus. In using it put a teaspoonful or

two of ether into the bottle, fit the cork in tightly, and set the bottle into hot water. Thrust the needle into the cavity to be emptied, and when all the ether in the bottle is vaporized remove it from the hot water and slip the free end of the rubber tube over the tube in the cork. As the ether condenses a vacuum is formed, and the aspiration is effected as completely as by the most perfect instrument constructed for the purpose. The effect will be a little more prompt if cold water be poured over the bottle. The thinner the glass, the less will be the risk of the bottle being cracked by the heat.

By adapting the needle directly to a cork and this to a small slender test-tube we have a very convenient pneumatic exploring needle. A drop or two of ether is in this case sufficient, the surplus vapor passing off through the needle before the puncture is made. The tube serves as a handle when the instrument is used, and at other times, by reversing the cork, as a case for the needle.

110 East Thirty-eighth St.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from July 19. 1874, *to August* 4, 1874.

Brown, J. R., Surgeon.—Relieved from duty as Medical Director of this Department, having been appointed President of the Army Medical Examining Board, to meet in New York City on August 4, 1874. G. O. 7, Department of the Platte, July 23, 1874.

Page, Charles, Surgeon.—To act as Medical Director of this Department until the arrival of the medical officer ordered to that duty. G. O. 7, c.s., Department of the Platte.

Randolph, Jno. F., Surgeon.—Granted leave of absence for 30 days. S. O. 104, Department of the Platte, July 29, 1874.

Wright, J. P., Surgeon.—Assigned to duty at Fort Hays, Kansas. S. O. 117, Department of the Missouri, July 30, 1874.

Gray, C. C., Surgeon.—When relieved by Assistant Surgeon Middleton, to proceed to Fort Duncan, Texas, for duty at that post. S. O. 116, Department of Texas, July 28, 1874.

Janeway, J. H., Assistant Surgeon.—When relieved by Surgeon Wright, to proceed to Fort Wallace, Kansas, for duty at that post. S. O. 117, c.s., Department of the Missouri.

Waters, W. E., Assistant Surgeon.—To proceed without delay to Fort Dodge, Kansas, and report in person to Colonel N. A. Miles, 5th Infantry, for duty. S. O. 116, Department of the Missouri, July 29, 1874.

Phillips, H. J., Assistant Surgeon.—Relieved from duty in Department of the Columbia, to proceed to New York City, and on arrival report by letter to the Surgeon-General. S. O. 159, c.s., A. G. O.

Middleton, P., Assistant Surgeon.—Assigned to duty at Fort Clark, Texas. S. O. 116, c.s., Department of Texas.

Cronkhite, H. M., Assistant Surgeon.—Granted leave of absence for 60 days, to take effect no later than Sept. 1, 1874, providing he furnishes a suitable substitute during his absence. S. O. 35, Military Division of the South, July 23, 1874.

Woodruff, E., Assistant Surgeon.—Leave of absence extended three months. S. O. 168, A. G. O., August 3, 1874.

Harvey, P. F., Assistant Surgeon.—Assigned to temporary duty at Fort Preble, Me., as Post Surgeon. S. O. 140, Military Division of the Atlantic, July 18, 1874.

Cherbonnier, A. V., Medical Storekeeper.—To report in person to the Surgeon-General. S. O. 160, A. G. O., July 24, 1874.

Medical Items and News.

Death of Dr. Murray Gaylord Milliken.—It becomes the sad duty of a former associate to announce the death of Dr. Murray Gaylord Milliken, at his home, Hamilton, Ohio, July 14th, 1874.

He was graduated at the Bellevue Hospital Medical College in the spring of 1870. During his collegiate course he was distinguished among his fellows by his acquirements, and entering the Bellevue Hospital in the month of March of this same year, his examination was in keeping with his previous reputation. In the hospital Dr. Milliken was most enthusiastic and assiduous. The records of his cases were most faithfully kept, and his powers of observation enabled him to collect enduring clinical evidence; and in the earnest midnight consultations of the house-staff, no opinion carried greater weight than his.

It was while in the performance of his duties that he contracted relapsing fever, from the prostrating effects of which he never fully recovered. Leaving the hospital in poor health, he strove to begin his professional career in this city, and although success attended his efforts his strength was not commensurate with the ambition which impelled him, and last winter he was obliged to succumb. Returning from the city to his old home he gradually sank and died of Bright's disease.

A young wife and a large circle of affectionate friends mourn the loss of one who was destined to become pre-eminent in our profession, and to them we tender our heartfelt sympathy.—T. A. McB.

Bellevue Hospital.—At a recent meeting of the Commissioners of Charities and Correction, the following resolutions were adopted:—

"*Resolved*, That the Medical Board of Bellevue Hospital shall on the 1st of September be organized in the manner following, and thereafter the present Board, as at present constituted, shall cease to exist:

"*First:* On the 1st of September the following named physicians and surgeons shall constitute the Medical Board of Bellevue Hospital: Dr. Austin Flint, Bellevue College; Dr. Alonzo Clark, Twenty-third Street College; Dr. Alfred L. Loomis, University College; Dr. Wm. B. Eager, no school; Dr. James R. Wood, Bellevue College; Dr. Henry B. Sands, University College (College of Physicians and Surgeons); Dr. Stephen Smith, New York University; Dr. Ernst Krackowizer, no school.

"*Second:* The members of the Medical Board will, as soon as may be after September, nominate to the Commissioners of Charities and Correction such physicians and surgeons as members of the Medical Board of Bellevue Hospital as will enable the Commissioners to appoint from the persons so nominated ten members in addition to those above named, so that the Medical Board shall consist of eighteen members.

"*Third:* When the Medical Board shall have been constituted of eighteen members, they shall be divided by the Commissioners into three classes. The term of the first class shall be for three years; of the second class, for five years, and of the third class, for seven

years. The members of each class shall be eligible for reappointment, and all appointments to fill vacancies shall be for seven years.

"*Fourth:* When a vacancy shall occur in the Medical Board, it shall be the duty of the Board to give public notice through one or more of the medical journals published in the city of New York of such vacancy, and to invite the application of such members of the profession resident in the city of New York as may desire to be candidates for appointment.

"*Fifth:* All applications for appointment shall be considered by the Medical Board, and the names of the candidates who, in the opinion of the Board, are highest in the order of merit for professional ability, attainment and personal character, shall be transmitted to the Commissioners, who will appoint one of the candidates named to the vacancy.

"*Sixth:* The Medical Board will assign the service to its several members, but such service shall be continuous throughout the year.

"*Seventh:* The rules and regulations of the Hospital not inconsistent with the foregoing will be continued in force.

"*Eighth:* That a pavilion hospital be immediately erected after January 1, 1875, on Blackwell's Island, for a Maternity Hospital to be administered by a separate Medical Board, organized in like manner to the Bellevue Medical Board."

On the 28th ult., the resolutions were adopted with an amendment authorizing the eight members to nominate, by September next, a number of physicians and surgeons from whom the Commissioners are to choose eleven additional members of the Board, making nineteen members in all.

The clause relative to the Maternity Hospital was also adopted.

BOARD OF PHARMACY OF THE CITY AND COUNTY OF NEW YORK.—Within the past fiscal year the Board held 3 stated, 1 adjourned, 2 special, and 6 examination meetings, the last comprising eighteen days, as follows:

1873.—August, 3 days; 6 candidates examined; 4 passed; 2 failed. October, 3 days; 8 candidates examined; 4 passed; 4 failed. December, 3 days; 20 candidates examined; 10 passed; 10 failed.

1874.—February, 3 days; 28 candidates examined; 24 passed; 4 failed. April, 3 days; 23 candidates examined; 17 passed; 6 failed. June, 3 days; 19 candidates examined; 12 passed; 7 failed.

Total, 104 examined; 71 passed; 33 failed.

82 of the 104 examinations were first; 11 were second; 2 were third examinations; and one a fourth one. 19 of the candidates were proprietors and 85 assistants. 3 proprietors and 22 assistants failed. 8 of the rejected, 1 proprietor and 7 assistants, did not reappear. 15 of the candidates were non-residents.

The total number examined since the organization of the Board is 279; and the total of the rejected 63.

Nationality of the candidates who appeared for first examination during the last year.

Proprietors.—U. S., 7; Germany, 4; England, 1; Ireland, 4. Total, 16.

Assistants.—U. S., 38; Germany, 9; England, 6; Ireland, 2; Canada, 2; Russia, 3; Scotland, 1; France, 1; Poland, 1; Norway, 1; Cuba, 1; Costa Rica, 1. Total, 66.

The registrations within the last fiscal year are 62 proprietors and 101 assistants. Total of registered proprietors 517, and registered assistants 546. Grand total registered 1,063.

Nationality of registered proprietors.—U. S., 24; Germany, 19; England, 4; Ireland, 9; Canada, 3; Austria, 1; Russia, 1; Cuba, 1. Total, 62.

Credentials.—From Board of Pharmacy, 26; from Pharmaceutical Colleges in U. S., 2; from Medical Colleges in U. S., 14; from Commissioners of Pharmacy (old Board), 13; Foreign Examining Boards, 6; German University, 1. Total, 62.

Nationality of registered assistants.—U. S., 37; Germany, 32; England, 8; Scotland, 2; Ireland, 5; Canada, 3; France, 4; Russia and Poland, 3; Austria, 2; Sweden, 2; Norway, 1; Cuba, 1; Costa Rica, 1. Total, 101.

Credentials.—From Board of Pharmacy, 48; from Pharmacy Colleges in U. S., 17; from Medical Colleges in U. S., 4; from Commiss. of Pharmacy (old Board), 4; from Foreign Examining Boards, 23; from German Universities, 3; from French Schools of Pharmacy, 2. Total, 101.

The receipts are as follows:

From 82 first examinations at $5, $410; from 62 registered proprietors at $2, $124; from 101 registered assistants at $1, $101. Total, $635.

The expenditures are:

Salary to secretary, $200; books, postage, printing and stationery, $136.73; legal adviser, $25; clerical service, $25; advertising, $6; sundries, $11.03. Total, $403.76. Surplus, $231.24.

Members of the Board of Pharmacy:—William Neergaard, M.D., *President;* Theobald Frohwein, *Secretary;* Paul Balluff; Benj. E. Hays, M.D.; W. De F. Day, M.D.

THEOBALD FROHWEIN, *Secretary.*

The Medical Press and Circular of June 10th comes to us with the following passage marked with a red pencil.

"THE 'CLINIC' AND THE 'MEDICAL PRESS AND CIRCULAR.'—About a month since we quoted from our American contemporary notes from an article which we headed *Obstetrics à l'Americaine* as a specimen of descriptive talk-talk of a not very high or professional style. Whereupon the *Clinic*, of May 23d, favors us with the following paragraph, which has fairly taken away our breath: 'The sneering allusions of this American-hating journal are easily accounted for by the well-known fact that nothing so pleases most Englishmen as derision of this country.' Having recovered from the shock, we humbly beg our contemporary's pardon for having *quoted from its columns* anything which might offend American susceptibilities; but the fact is, whenever we read any 'sneering allusions' at American surgery, education, or schools, they are invariably in the columns of our contemporary, the *Clinic*.

"Our readers will bear us out that our quotations in this direction have been taken and acknowledged from this source. But we must beg our contemporary to disabuse the minds of its readers that nothing so pleases Englishmen as derision of America. We give this an emphatic denial. Medicine, like science, has no particular country; its disciples and true enunciators are found in all parts of the civilized world; and we may add (which our contemporary may take as soft-soap) that from our exchanges in a dozen languages we quote independently of name or country articles which are to our minds the most interesting, for perhaps the majority of which we are indebted to American journals. When political papers indulge in such language we attribute it to motives which are easily understood, but when a medical journal so far forgets its position as to assert that most Englishmen hate America, we are ashamed of it, as will doubtless all right-minded and right-thinking *confrères* be on the other side of the Atlantic."

Medical Department of Life Insurance.

LIGHT WEIGHTS AS LIFE INSURANCE RISKS.*

By DR. A. HUNTINGTON,

OF NEW YORK CITY.

WHENEVER we wish to judge of a person's weight, or, as we say, *guess* at it, almost the first thing we do is to measure him with the eye, fixing his height, and of course along with this his general build or contour. But the one point that affords us most aid in forming our opinion is the number of feet and inches of his height, thus showing that we all have, as a result of ordinary observation, a certain idea of a standard or relation that should exist between a man's height and his weight. Now, connecting this with our subject, we observe that the object of all medical examinations in life insurance is to enable the company, through its examiner, to form a reasonable and approximate estimate—for of course it cannot be accurately determined—of the prospective longevity of the applicant.

In forming his opinion it is necessary for the examiner to consider many things aside from the mere physical examination of the applicant; but while the evidence derived from other sources may exert a powerful influence over his decision, yet that presented to his own educated senses by a careful physical exploration of his subject, is, after all, that upon which he most depends; and, as a result of some considerable experience, I am led to the belief that there is no one thing more important and worthy of consideration than the relation between height and weight.

I propose in this article briefly to consider the *significance* of this relation, or rather the *want* of relation, and more particularly as shown in those whose weight is *below* the proper standard rather than *above* it, for I am well persuaded that mistakes are oftener made in writing upon *light* weights than *over* weights. Waiving, however, all argument on the comparative safety of over and under weights, I shall speak only of the latter, and of the significance of a lack of weight as compared to a given height.

Observation among large numbers of people has pretty well established the fact that there *is* a standard or average co-relation existing between the height and weight of healthy adults. For instance, a man standing five feet seven or eight inches high should weigh about 145 lbs., and should such a person present himself for inspection, other things being equal, he would be set down as a good risk, and the result would, in a majority of instances, prove the judgment correct. Should, however, another individual of the same stature be found to weigh only 110, 115, or 120 pounds, the question naturally arises, Why this difference? and having in our mind the standard of weight that should coexist with a given height, we at once seek for some reason to explain this want of conformity to the rule.

A small variation is of course easily accounted for by the hundred constantly occurring things that are at work hindering the formation of tissues, or stripping off and destroying those already formed; and so we say there is a certain amount of variation in weight that is perfectly compatible with the maintenance of ordinary good health. It is not to these small and reasonable variations that we wish to call attention, but only to those that are sufficiently great to attract the particular notice of the examiner. The ordinary causes of variation, such as mental trouble or excitement, prolonged muscular exertion, profuse perspiration, any slight and temporary derangement of digestion, etc., etc., are easily recognized by any careful observer, and so long as they do not affect us beyond reasonable limits, we pay no attention to them, considering them as the natural changes in our ever-changing bodies. But when there is something which goes beyond the ordinary and reduces the weight of a person far below the standard, then it is that this fact becomes a more significant and important one. The examiner may notice the fact, and yet it very often happens that he will not succeed in finding a satisfactory explanation of this failure of the powers of nutrition to bring the weight of the body up to the proper standard, and it is just here that I think we should be the more careful.

We know there *is* a reason, though we fail to discover it. We know there is a cause within interfering with digestion and assimilation, or in some way consuming and wasting the tissues as fast as, or faster than they can be produced. Whichever it be, we should be suspicious just in proportion to the extent of the shortcoming in weight. Our suspicions may be removed by evidence explanatory, and if so, well; but without a satisfactory explanation we will do wisely to use extreme caution in recommending light weights.

Many diseases in their incipiency are very difficult if not altogether impossible of detection, and are yet all the while at work, persistently and silently, interfering with the nice balance that should exist in the system, and this may be the case often for a long time before any indubitable proofs of their presence exhibit themselves to the eye and ear. Most prominent among such insidious diseases, alas! is the one which the mortuary statistics of all life companies prove to be their bitterest enemy. I allude, of course, to consumption.

If it be true, then, that even among selected risks this disease is so often met with, and it be also true that this interference with the tissue-making process is often the earliest and only observable prelude to a more direct assault, it certainly is a point well worthy of the keenest scrutiny whenever present. Sometimes it is true that a party evidently afflicted with tubercular trouble will grow fat as we commonly say, and that, too, often before a final breakdown; but these are simply exceptional cases, and do not affect the position we maintain. As a rule, it may be safely laid down, that *want of weight*, plainly indicating the presence of the wasting or interfering process—one or both—is one of the most common and persistent features in consumptive people. Investigation has also revealed the fact that, of those insured who have died of consumption in several of our oldest and largest American companies, by far the greater part consisted of light weights at the time of insuring, thus clearly showing that the "picket guard" of the enemy was in view at the time insurance was procured, and also that the examiner in those cases failed to recognize him. Do we not all make like mistakes every day?

I believe many a loss to our companies could be saved if more importance were attached to this part of the record than is usually given to it. In an article so short as this must necessarily be I have not space to consider this subject in connection with other diseases, but simply to take up this one in which it is most prominent.

Of course I am well aware that light weights may sometimes be very good risks, but I am also well persuaded that they are too frequently passed and accepted when they are not good risks, and if this article should be the means of awakening thought in the mind of any examiner, tending to make him more

* A portion of this article was published in the *Insurance Times*, in 1871.

careful in the acceptance of light weights, it will not have been written in vain.

Without attempting, then, to establish any rule for guidance in these cases, I would simply suggest the propriety of rejecting cases of marked light weight where hereditary disease is revealed or suspected in the family; where the case is an exception to a family characteristic, even if hereditary disease is not marked (for many eminent minds, both in this country and in Europe, are becoming convinced that the proportion of non-hereditary cases of consumption is far larger than has heretofore been believed); where the habits are now or have been dissipated; where there has been chronic diarrhœa; where lightness of weight remains for an unreasonable time after any grave disease; and finally, where it exists to any *considerable extent*, even without apparent cause, and though the party seem to be well.

I am opposed to arbitrary rules in general, but I know of none that I think would be followed with better results than one applying to light weights, and when I say light weights of course I mean that degree of departure from the standard which does not come within a reasonable and allowable variation. Any man, as before stated, may vary somewhat from the standard; but when he is found to fall considerably short of it he should be at least postponed, and if within a fair time he fail to come up approximately to his gauge, it will be best to reject him, for I honestly believe that in eight cases out of ten he will, to say the least, fall short of his expectancy.

In conclusion, then, I believe that examiners too often fail to recognize the significance of light weight, and especially in those cases where there is no hereditary taint traceable in the applicant's family history. We are too apt, I think, to say to ourselves, "The record is a clear one, and though we cannot explain this light weight, yet we shall be justified in overlooking it *on account* of the *clear record* and *absence* of physical signs of disease," still entertaining the idea that all consumption is hereditary, when the real fact is that much of it is not. We should certainly attach much greater significance to light weight when the family history does reveal hereditary disease, but we should not be in too much of a hurry to ignore it in those cases where hereditary taint is absent. In the majority of cases it means something, and I think if any man will take the trouble to investigate the history of insured light weights, he will be satisfied that they are not healthy to insurance companies.

Every risk should be considered by itself, and all the arguments tending to satisfactorily explain away the lightness of weight should, of course, be allowed its proper influence. I am satisfied, however, that we will be justified in laying down the proposition that, *as a rule, light weights are not good insurance risks*, and then leave it to be hereafter determined how far and in what respects that assertion is correct.

DISEASES CAUSED BY THE INHALATION OF DUST.

By Dr. GOTTLIEB MERKEL,

of Nürnberg, Germany.

Translated by Dr. Horatio Bridge, of New York City.

The idea, that through the inhalation of impure air, especially that which contains dust in greater or less amount, diseases of the respiratory organs may be induced, is so old, so universally established, that, indeed, scarcely anything more in general can be said concerning the same. Every text-book and treatise on pathology expresses this idea in its connection with the etiology of lung diseases, and no one has as yet seriously undertaken to maintain the contrary, or to doubt the fact. Meantime there are so many injurious influences which affect the respiratory organs, that this single noxious influence of the inhalation of dust, generally speaking, attracts but little attention, because the breathing in of air mixed with dust, as it occurs in every-day life, is only a transitory circumstance, and is wont to be considered only an exciting cause among persons otherwise predisposed to diseases of the organs of respiration (*e.g.*, through inheritance, unfavorable objective influences, improper diet and dwellings, irregular habits of life, defective development of the thorax, etc.).

This etiological consideration assumes a much more important aspect—1, when it can be proved that it is capable of producing forms of disease peculiar to itself; and 2, when large numbers of persons become diseased, who are compelled to breathe an atmosphere rendered impure by dust.

The first attempt to establish proof that special forms of disease follow the inhalation of dust was made, to the best of our knowledge, by the Italian, Ramazzini, in his work, "De Morbis Artificum Diatribe, Ultrajecti, 1708," for he was the first who called attention to wide-spread diseases prevailing from such causes among laborers and skilled workmen, whose employment was connected with the formation of dust.

From this time on there appear in all works upon diseases incident to the trades, and in board of health publications, opinions concerning the injuriousness of occupations which are characterized by the presence of dust.

Naturally the subject may be considered under two heads. On the one hand we have those forms of disease which may be induced by the inhalation of any kind of dust; and, on the other, the real "pneumonokonioses" (Zenker), which owe their existence to special kinds of dust. This division is then, I hold, the only possible one, and in the following pages I shall strictly observe the same, and only when treating of certain "pneumonokonioses" shall I incidentally enumerate the occupations of artisans and factory workmen which are capable of causing such forms of disease.

I must at this point at once remark, that the types of disease, even of the real "pneumonokonioses," are unfortunately not so well defined as one might believe and expect, and it is precisely on this account a difficult task to present a clinical picture of all the diseases here under consideration; it is all the more difficult, too, from the fact that it is scarcely possible for any one physician to have had the opportunity to observe all kinds of dust inhalation.

Although my opportunities for observation have been quite extensive, I must before proceeding farther confess, that in the majority of cases coming under my notice I have not made the diagnosis until the autopsy was performed; moreover, I cannot conceal the fact, that, the longer I have busied myself with the subject, the more decidedly has the conviction forced itself upon me, that in very many cases diseases of the respiratory organs, otherwise considered as idiopathic, have for their prime cause the inhalation of dust, and that the time will come when the diagnosis can be more positively made during life. In making this statement I do not at present take into consideration those cases of disease which affect large bodies of workmen, and which are ob-

served and easily recognized by physicians officially attached to mining and manufacturing companies, as they occur among miners, or needle and steelware polishers; I confine myself rather to those cases of chronic lung disease, as they are observed in private and hospital practice in all places, especially, however, in large manufacturing cities. I may add, also, that I do not write this little contribution as a monograph upon diseases caused by inhalation of dust, but rather as a statement of the views of a practical physician for the use of practical physicians, in order to call their attention to the meaning and importance of these forms of disease, and to offer them a ready guide to diagnosis and general prophylaxis.

Whoever wishes to enter into a more special study of the subject must consult that meritorious work written by Hirt (Die Krankheiten der Arbeiter. 1. Abtheilung, 1. Theil: Die Staubinhalationskrankheiten und die von ihnen besonders heimgesuchten Gewerbe- und Fabrikbetriebe. Breslau, 1871), from which I have for the most part taken statistical statements and many valuable ideas relating to the employments of artisans and factory workmen, with which I have had no opportunity to become personally acquainted. I would add, that I have in this work laid the chief stress upon the description of the "pneumonokonioses," properly so called, and have added all the rest, especially that in the appendix to the second part, for the sake of completeness.

I.

DISEASES WHICH MAY BE INDUCED, OR RENDERED WORSE BY THE INHALATION OF ANY KIND OF DUST.

1. *Catarrh of the Respiratory Organs.*—Whoever for the first time enters an atmosphere filled with dust, complains at once of dryness of the fauces, throat and lungs, as the first disagreeable symptom, and it would be superfluous to say another word in the endeavor to prove, that whoever must remain for a considerable time constantly in such an atmosphere is liable to contract a catarrhal inflammation, through mechanical irritation, in the parts above-named. The first troublesome sensations will appear at once, as stated, before material pathological changes can have occurred. The dryness in the throat is indicated at once by the effort of coughing to get rid of a disagreeable foreign substance, and this takes place before catarrh has declared itself; for there exist at this time not only real dryness of the mucous membrane, and clinging, tenacious mucus, but also an innumerable number of fine foreign particles, which the short and troublesome cough is designed to remove, but which, nevertheless, partly on account of their minute size and sharp edges (as sand, coal-, iron-, clay-dust), and partly on account of their propensity to attach themselves by suction to the moist mucous membrane (*e. g.* wood or cotton dust), cling firmly to it and withstand the action of the cough and of local muscular contraction. A long walk in our city, in a dry winter season, when a strong east wind whirls about the fine dust of the Keuper sandstone with which our streets are paved, is sufficient to excite these troublesome sensations; still more a prolonged stay in some factory, as, for instance, in a lead-pencil factory, in the room where the cedar-wood is cut and shaped, or in a tobacconist's workshop, where tobacco is being sifted. In a favorable case this irritation disappears, the foreign particles are expectorated, and no unpleasant consequence remains. Still (to choose a rather trivial example), the day after one has spent an evening in a small drinking saloon, in which there has been much smoking, the grayish, black, tenacious sputa, and the particles of coal easily found in the same, are the only reminder of the noxious agent, which six or eight hours previously had attacked our organs of respiration.

In most such cases, then, it is quite sufficient to cease breathing the injurious atmosphere to avoid all bad consequences; those, however, who are especially disposed to lung diseases, do not so lightly escape, but acquire a real catarrhal inflammation, and suffer with the same for a long time, after the sputa no longer show a trace of the inhaled dust.

The irritation produced by the foreign substance results in a congested condition of the mucous membrane, with its consequent hypersecretion, in which we recognize the clinical picture of catarrh; and—upon this I lay especial emphasis—there is not the slightest difference between a simple catarrh and that induced by the inhalation of dust, when the exposure has been of slight duration. Such catarrhs arise, indeed, among all workmen without exception, whose employment is associated with the development of dust. These workmen, however, do not come under clinical observation, simply for the reason that they consider the catarrh an unavoidable evil, which each one, in accordance with a common experience, has to incur, and which in most cases passes off without inducing further evil results. The mucous membrane becomes accustomed to this maltreatment after a time, and an occasional cough does not cause much annoyance. On the other hand, however, there are some who do not escape so easily. The catarrh, which occurred at first, does not subside; it is kept up by the continued action of the dust; it becomes chronic, and now perhaps after fever and other marked signs of departure from the normal physiological condition have declared themselves, the patient resorts to a physician, or enters an hospital.

The description of chronic catarrh is too well known to allow of the repetition of its symptoms here, even if I were so disposed. It should, however, be stated, that at the present time no distinguishing sign is known, which would pass as a means of differential diagnosis between simple chronic catarrh and that arising from dust inhalation. The sputa, indeed, do not at present aid us. I have repeatedly noticed, that workers in ultramarine, not suffering with disease of the respiratory organs, but consulting me on account of other diseases, have coughed up particles of ultramarine enclosed in cells, even a fortnight after they had left their work. This clinging of dust to the lining membrane of the bronchiæ does not continue, according to my observations, more than a fortnight.

If, then, the expectoration of such dust-particles continues still longer (after the work has been completely given up), this is a sign that other pathological conditions have supervened. But more in regard to this farther on. It may be said concerning the anatomical changes in these catarrhal affections, that one scarcely ever has the opportunity to observe them in the human being. And this opportunity is only then given when some workman, exposed to the inhalation of dust, and suffering with a consequent catarrh, dies in the first few weeks of his employment from some other disease. I was never so fortunate as to meet with such a case. The researches of Knauff give, at least in some degree, information on this point ("Das Pigment der Respirationsorgane," *Virchow's Arch.*, Bd. xxxix., 2, 3 S. 442, ff.).

He placed animals for a longer or shorter time in an atmosphere thickly filled with coal-dust, and observed that the ciliary epithelium of the bronchial mucous

membrane became changed into chalice-like epithelium, filled with fat and myeline granules, and became detached from the mucous membrane. To this process Knauff ascribes chiefly the formation of the mucus, the secretion of the mucous glands themselves being comparatively insignificant. The desquamated degenerated epithelium, which assumed at one time the form of a Roman drinking-glass, whose base had been broken off, at another that of tumefied round cells, took up, he said, within themselves the minute foreign particles, which had been deposited on the mucous membrane. The same was true, however, of the alveolar epithelium. So the explanation was most simple, why, so soon after the first inhalation, dust-particles appeared enclosed in the cells. Knauff saw cells containing ultramarine, indeed, after the inspiration of pulverized ultramarine had been continued only ten minutes.

Knauff's assertion, however, that for weeks and months dust-particles occur in the sputa, enclosed in cells, without more serious pathological changes in cases of simple inhalation of dust, does not agree, as has been already stated, with my own researches. Here, in this connection, let me communicate an interesting observation which I made upon my own person. Although I noticed, after a short stay in a very dusty factory (whither I had gone to study the method of conducting the work, and the development of dust caused by the same), that the dust-molecules, from the very first demonstrable in the sputa, were after a short time no longer to be found, or at the latest on the following day, still, in the following case, the history was quite different:

I visited, while suffering with an intense catarrh of the nose, larynx and trachea, a factory (in my own town) in which gas-burners were polished with soapstone (magnesia and silica). I remained for about half an hour in the room in which the soap-stones were sawed out and turned into proper form, enveloped in a thick cloud of dust. Immediately after I left the room, the sputa contained free dust-particles in large amount, and a little later they were found enclosed in the cells. I found the last well-marked soapstone molecule three days after the inhalation. It was undoubtedly owing to the existing catarrh in this case that the dust remained so long in the bronchial tubes.

The chronic catarrhs of such origin disappear, when the workmen have absented themselves some time from their work, with such suitable régime and medication as one finds in every book on theory and practice. I have noticed that the workmen, after recovery from such chronic catarrhs, continued quite well, although they resumed their dusty employment, and followed it up for a long time. Of course the doubt always remained in these cases, whether the chronic catarrh was the result alone of dust inhalation, or whether other causes, either singly or associated with others, did not induce the disease.

II.

EMPHYSEMA OF THE LUNGS.

When we speak of emphysema of the lungs in connection with disease caused by dust inhalation, we of course do not take into consideration those vicarious emphysemas, which develop in cases of degeneration and destruction of greater or less portions of the lung tissue. These are simple conditions consequent on forms of disease, which shall be spoken of farther on, and which stand in no immediate relation to the original injurious influence exerted by the inhalation of dust.

We have next to notice that emphysema which is the result of simple or chronic catarrh, and that which would be considered as arising from the direct action of the inhalation of dust upon the lung parenchyma.

We can readily understand how an emphysema may result from a catarrh, if we bear in mind that, during the violent efforts of coughing, which are frequent in the course of this affection, the compressed air is forced upwards through the lower bronchus into the obliquely descending upper bronchus, and thence—under a sort of centrifugal pressure, caused by the obstruction which it encounters at the narrowed glottis—passes into and distends to their utmost the already full alveoli and the thorax. If this expulsive force should meet with an obstruction, in the form, for example, of secretion within the bronchioles, there would then be no difficulty in accounting for the origin of emphysema, and especially so, in view of the fact that the dilatation of the upper portions of the lung, during the course of a chronic bronchial catarrh, through the compression of air by violent coughing, has been repeatedly proven.

Whether now the particles of inhaled dust which cling to the walls of the bronchioles, and so clog their apertures, can act the same part as an obstructing bronchial secretion, as Hirt is inclined to assume, remains as yet uncertain. It is indeed possible; still, in repeated microscopical examinations of fresh, of hardened, and of dried pneumonokoniotic lungs, I have never found such an obstruction due to foreign particles. Knauff, too, speaks nowhere of such a filling up of the alveoli or bronchioles with coal molecules.

Another question is this, whether a true emphysema can occur directly through the deposition of certain kinds of dust in the lung parenchyma, causing disease of the tissue. The observation of Zenker (atrophic conditions in the lungs of two tobacco workmen) has started this question, which seems to receive support, though indeed of no great strength, from a case observed by me (to be spoken of farther on). At all events, this question yet remains open, and still further observations and examinations must be added to those already made before a final decision can be given. At present the fact remains for us a fixed one, that the inhalation of dust leads to emphysema of the lungs, especially in that it gives rise to acute and chronic catarrhs. The classification of Hirt, according to which emphysema arises most often from mineral, then from vegetable, and finally from animal dust, seems to be based (diminishing in the order mentioned) upon the more varying powers of these different substances to produce catarrh than upon some specific influence exerted upon the lungs and their tissues.

We must reckon ourselves also among the sceptics when we consider the origin of bronchial asthma from the inspiration of certain kinds of dust (especially dust of the ipecacuanha root). In this case, irritation of the pharynx and mucous membrane may be the cause, and not the inhalation itself. Hirt is perfectly right in denying the propriety of treating hay-asthma under this head, for in this case a catarrh is indeed present, which is, in all probability, caused by parasites.

The consideration of the crystals, spoken of by Leyden, cannot be introduced here, for these may be present, according to my own and Zenker's observations, without a trace of asthma.

The treatment of emphysema in accordance with our views of its mode of origin differs in nowise from the treatment of this disease generally adopted. Here also the avoidance of an atmosphere filled with dust is of chief importance.

(To be continued.)

MORTALITY OF CONSUMPTION.

AN ANALYSIS OF THE EXPERIENCE OF NINETEEN GERMAN LIFE INSURANCE COMPANIES DURING THE YEAR 1871.

UNDER the above title Dr. A. Oldendorff, of Berlin, Prussia, has recently published, in the *Journal of the Royal Prussian Statistical Bureau*, a most exhaustive and valuable contribution to statistical knowledge. Our space will of course not allow us to furnish our readers with a translation of this interesting article, but we shall give as full an extract as possible of the more important parts of the paper.

In chapter first we notice the statement that out of twenty life insurance companies doing business in Germany there are as many as fifteen whose mortality exceeded the actuarial expectation.

In estimating the number of deaths from consumption Dr. Oldendorff includes only those which appear in the reports of the different companies under the following titles:

Pulmonary tuberculosis; tuberculosis; miliary tuberculosis; acute miliary tuberculosis; acute tuberculosis; acute pulmonary tuberculosis; acute tuberculosis of the lungs and larynx; pleurisy and miliary tuberculosis; pleurisy and consecutive pulmonary consumption; acute pulmonary tuberculosis following pleuritis; chronic pulmonary tuberculosis; tuberculosis following chronic bronchial catarrh; laryngeal tuberculosis; pulmonary and intestinal tuberculosis; intestinal tuberculosis; tubercular bronchitis; tubercular inflammation of the lungs; inflammation of the lungs with consecutive tuberculosis; cerebral tuberculosis; chronic pneumonia; cheesy pneumonia; chronic pneumonia and laryngitis; chronic pneumonia and laryngeal phthisis; pulmonary consumption; phthisis; pulmonary and laryngeal consumption; bronchial and pulmonary consumption; bronchial consumption; laryngeal phthisis; pulmonary and abdominal consumption; intestinal consumption; chronic pulmonary consumption; galloping consumption; hæmoptysis; chronic bronchial and pulmonary catarrh, with emaciation; chronic inflammation of the chest; and chronic disease of the lungs.

The writer then very properly calls attention to this long list of diseases as affording an illustration of the confusion which exists among the companies in the nomenclature of diseases. He also urges them to adopt for future use a uniform system of nomenclature. After excluding all doubtful cases, in the manner already described, it was found that the minimum number of deaths from consumption in 1871 was 989.

The great majority of these 989 deaths occurred in Germany, and not in any special part of it, so that it could not be said that those districts, in which consumption was known to be a more than ordinarily common disease, furnished a large proportion of the cases.

In only two companies were the reports so framed that any idea could be obtained of the influence exerted by occupation upon the tendency to contract consumption. According to these the mortality from consumption was not excessive in any particular class. This, too, would probably be found to be the experience of the other companies.

From the table it will be seen that, among the nineteen life insurance companies, *the deaths from consumption constituted about one-fifth of their total mortality.* Or, if we ascertain the total number of deaths which occurred among 1,000 insured persons, we find the average to be 18.45; and from consumption 3.79, which is again a fifth of the total mortality. The differences between the ratios of the different companies may be in great measure explained by the fact that in those which have insured a large number of young lives the mortality from consumption will be

TABLE I.

NAME OF COMPANY.	No. of Individuals insured.	No. of Deaths from all Causes.	DEATHS FROM CONSUMPTION.		OUT OF 1,000 INSURED INDIVIDUALS THERE DIED:		DEATHS FROM SMALL-POX.	
			Numb'r.	Per. cent. of Total Mortal.	From all Causes.	From Consumption.	Number.	Per cent. of Total Mortality.
Germania	43,134	766	159	20.7	17.7	3.7	118	15.4
Gotha	88,081	920	102	11.1	24.2	2.7	44	4.8
Thuringia								
(*a*) Life Insurance Branch	10,932	184	45	24.5	16.8	4.1	18	9.8
(*b*) Burying-funds Ins. Branch	7,017	183	35	19.1	26.1	4.9	23	12.6
Leipzig	16,631	330	71	21.5	19.8	4.3	19	5.8
Magdeburg	14,924	289	59	20.4	19.4	3.9	37	12.8
Stuttgart	15,672	249	53	21.3	15.9	3 4	16	6.4
Providentia	7,204	124	30	24.2	17.2	4.2	13	10.5
Prussia.								
(*a*) Life Insurance Branch	6,125	71	21	29.6	11.6	3.4	9	12.7
(*b*) Burying-funds Ins. Branch	10,696	72	20	27.8	6.7	1.9	6	8.3
Bavaria	3,611	100	16	16.0	27.7	4.4	8	8.0
Darmstadt	2,007	48	7	14.6	23.9	3.5	5	10.4
Baden	5,920	73	17	23.3	12.3	2.9	10	13.7
Iduna	15,000	286	66	23.4	19.1	4.4	25	8.7
Austro-Hungar'n Employees Ins. Co.	11,408	119	34	28.6	10.4	2.9	0	.0
General R. R. Ins. Co. in Berlin	6,944	105	24	22.9	15.1	3.5	16	15.2
North German	3,870	45	15	33.3	11.6	3.9	8	17.8
Teutonia	12,516	284	93	32.7	22.7	7.4	50	17.6
Kosmos (of Holland)	6,232	120	29	24.2	19.3	4.7	10	8.3
Swiss Annuity Institution	7,347	119	29	24.4	16.2	3.9	9	7.6
Janus (in Hamburg)	15,755	329	64	19.5	20.9	4.1	32	9.7
Total							476	9.9

found to be greater than in those companies which hold insurances on a proportionately larger number of old lives.

Section 8 of this paper gives a statement of the mortality from small-pox among these 19 companies. The figures will be found in Table I. An average mortality from small-pox of nearly *ten* per cent. appears to us unusually heavy. In a recently published analysis of 1,000 deaths, which occurred in the experience of a life insurance company in this city, it was stated that 9 out of the 1,000 died from small-pox, or a little less than 1 per cent.

In section 9 it is shown that the mortality from consumption among the 19 companies is absolutely as well as relatively greater for the male than for the female sex. Among 1,000 insured males, 3.69 died from consumption; while among 1,000 insured females only 2.78 died from the same disease.

Section 10 discusses the question of age in connection with the deaths from consumption. The 925 deaths from consumption, which occurred among 18 of the companies already referred to, were distributed among the different ages, as follows:—

TABLE II.—CONSUMPTION.

Ages	20 and under.	21–25	26–30	31–35	36–40	41–45	46–50	51–55	56–60	61–65	66 & over.
Number of deaths	5	19	104	175	180	146	120	83	48	27	18
Number of deaths among 1,000 insured persons	3.53	1.89	3.86	4.23	3.72	2.97	3.78	3.52	3.21	3.16	

TABLE III.—MORTALITY OF CONSUMPTION ACCORDING TO SEASONS.

Experience of Eighteen Companies.		December.	January.	February.	*Winter.*	March.	April.	May.	*Spring.*	June.	July.	August.	*Summer.*	September.	October.	November.	*Autumn.*
Both sexes	Number of deaths	73	90	89	252	100	75	97	272	81	77	46	204	70	50	77	197
	Per cent.	7.89	9.73	9.62	27.24	10.81	8.11	10.49	29.41	8.76	8.32	4.97	22.05	7.57	5.41	8.32	21.30
All ages to 45 inclusive	Number of deaths	48	58	56	162	65	59	76	200	62	53	30	145	42	28	55	125
	Per cent.	7.59	9.18	8.86	25.63	10.28	9.34	12.03	31.65	9.81	8.39	4.74	22.94	6.65	4.43	8.70	19.78
All ages above 45	Number of deaths	25	32	33	90	35	16	21	72	19	24	16	59	28	22	22	72
	Per cent.	8.52	10.92	11.26	30.70	11.95	5.46	7.17	24.58	6.49	8.19	5.46	20.14	9.56	7.51	7.51	24.58

MORTALITY FROM ALL CAUSES EXCEPT CONSUMPTION.

Experience of Eighteen Companies.	December.	January.	February.	*Winter.*	March.	April.	May.	*Spring.*	June.	July.	August.	*Summer.*	September.	October.	November.	*Autumn.*
Number of deaths	345	313	280	938	310	242	328	989	289	281	256	826	266	262	290	818
Per cent.	9.68	8.79	7.86	26.33	8.70	9.60	9.21	27.51	8.11	7.89	7.19	23.19	7.47	7.36	8.14	22.97

Comparing the mortality rates for the different seasons, Dr. Oldendorff finds (Table III.) that during the spring of the year the mortality from consumption, as well as from all other causes, is greatest. Next comes winter, then summer, and finally autumn. This, we believe, coincides with the experience of our own life insurance companies; at all events, our mortality is almost always heavier during the months of March, April, and May, than at any other season of the year.

Finally, comparing the total consumptive mortality of the German life insurance companies with the average mortality from the same disease in the German population at large, Dr. Oldendorff comes to the conclusion that the mortality from phthisis among the so-called selected lives, at least between the ages of 20 and 30, is abnormally high. For instance, in the city of Frankfort-on-the-Main the mortality from consumption in 1872, for the ages 20–30, was 37.2 per cent. of the mortality for all causes; while, according to the experience of the life insurance companies, it was, for the same ages, 41.4 per cent.; or, out of every 1,000 persons living in Frankfort, between the ages of 20 and 30, there were 2.8 deaths from consumption, while the life companies experienced 3.5 deaths out of 1,000 persons of the same ages. And, furthermore, we must remember that the 989 deaths from consumption represented the *minimum* mortality experienced by the companies from this one source.

From section 18 we learn that the companies rejected, on on average, 14.7 per cent. of all the applications made to them for insurance; the smallest proportion being 6.4 per cent. (Swiss Annuity Institution), while the largest was 19.8 per cent. (The Prussian Life Ins. Co.).

In the last section of this exhaustive work Dr. Oldendorff discusses the scientific value of carefully-studied life insurance mortuary reports, and urges upon the companies to make this hereafter a permanent custom among them.

THE MEANS OF AMELIORATING AND RETARDING THE EFFECTS OF AGE.*

BY JOHN GARDNER, M.D.,

OF LONDON.

THE first item of advice we would offer to persons who have passed the meridian of life is, if possible, to secure for themselves mental tranquillity. The secular business of life, if it has been mainly employed, as it is with most of us, in obtaining the means of living

* From Gardner's "Longevity."

and provision for ourselves and families, ought to be over as soon as enough has been acquired to satisfy reasonable wants and desires, to secure contentment and quiet so far as worldly possessions can give them. If with an adequate fortune some object of ambition has been pursued, with age should come a calm retrospect and estimate of its worth. It is happy for a man who reaches this goal at the age of fifty, or earlier. At sixty, or as soon after as possible, our desires should be adjusted to our attainments and means, by modifying the former rather than attempting to better the latter by hazardous or even by legitimate enterprises. At least, all mental anxiety or disquietude should be carefully avoided. In this country, indeed, there are very many persons who never have any grounds for an anxious thought. Born to fortune and exempt from ambition, they are, nevertheless, subjected to the common lot of humanity, beset by troubles of another kind, some real, some imaginary. It is not the idle and listless who, in any marked measure, enjoy the blessing of longevity. Wholesome occupation and moderate means are most favorable to long life, which, as we have before remarked, attaches to the clergy, and to the female sex pre-eminently.

This fact teaches us the next lesson, namely, that *sobriety* is most congenial to health and life. Experience fails to support the pretensions of the zealous preachers of total abstinence from fermented liquors. A judicious use of wine, the quantity and quality being duly regarded, is certainly beneficial in advanced life. No rule can be given with any approach to accuracy as to the kind and amount of wine which is desirable. So much depends upon previous habits. I, for my own part, as a physician, greatly prefer to prescribe the wine, and define the quantity, for an aged patient who has been in early and middle age extremely temperate. If wine or other stimulant has been indulged in excessively, it is rare, on careful investigation, to find a person at or beyond the age of sixty-three entirely free from some damage in one or more organs. Still such damage, if not considerable, admits of reparation, when there is a resolute will to abstain, or regulate the amount of stimulants by the real needs of the constitution.

As to food, common sense should suffice for every one to observe the effects of any course, or article of diet, and to avoid any which is felt to be injurious. Generally, aged persons require a diet containing most nutrition in the least bulk. Hence, animal substances should preponderate. Generally, they will have a preference for mutton, poultry, game, and often for gelatinous food, rather than beef, pork, lamb, or veal. And this preference is in accordance with physiology. Farinaceous substances, although not excluded from the role of diet, should be adopted sparingly; exceptions depending upon special conditions, such as morbid leanness, disorders of the kidneys, etc., which will be spoken of below. We often witness grave errors committed from want of correct information. For instance, arrowroot, or some form of starch, beef-tea, so-called concentrated foods, etc., are taken for the muscular debility common in the aged. Under such a diet the weakness continues, and increases often to a fatal end. In the general defect of nutrition some one organ droops in function, and becomes disorganized, to the danger or loss of life.

As with the use of wine and stimulants, the diet of aged persons must be regulated by giving due consideration to their former habits, present mode of living, pecuniary means, and the like; but one rule may be suggested, namely, to divide the amount of food taken into three or four meals, rather than one large one (dinner usually), in the day. A sense of fulness or oppression after eating should never be disregarded.

As the system in advanced life is more amenable to certain morbid influences from without than in early life, it is advisable for elderly people to be more watchful against them.

A wholesome dwelling, well drained, free from damp, its interior unaffected by changes of temperature without, and admitting free ventilation when artificially warmed, are certain conditions of prolonged life. Nothing is so fatal to old people as cold, and this is intensified by the addition of moisture. Therefore, when possible, a residence should be selected in an elevated position, on a sandy or gravelly soil, where fogs are rare, and where exercise, walking or riding, can be taken in fine weather without getting chilled or wetted. Night air, in our climate, ought never to be encountered. The evenings, if not the entire day, should be spent in rooms moderately heated—not too hot—and well ventilated. About 60° F. is the temperature most congenial. The bedroom especially should be kept at this heat both night and day. A glass-house for walking exercise during the cold of the winter is a great comfort. Exposure to cold with wraps about the throat and heavy clothing, should be decidedly avoided. Some people think it effeminate to have a fire in their bedroom in cold weather; this is a great mistake. Both for warmth and ventilation no means have yet been devised equally advantageous with an open fire and chimney; and by the use of certain species of coal, which burn slowly without requiring to be stirred, a tolerably equal temperature can be maintained through the night. When there is no fire the chimney should be kept open for the ventilation. Disturbed sleep and headaches in the morning are common consequences of the use of a closed register stove.

Of suitable clothing, varying with the seasons, it is unnecessary to speak.

Hot baths demand also great care. I have often known, and more frequently heard of, cases where they have proved fatal. When there are symptoms of head trouble, pains, dizziness, etc., suddenly depriving the brain of blood, immersion in hot water causes the blood to flow to other parts of the body, and induces cerebral collapse, and either immediate death, or fatal paralysis, or stupor (coma). For cleanliness, and to preserve a healthy state of the skin, I recommend all old people to employ hot water with soap and flannel or sponge (the flannel is best), using a moderate degree of friction. A foot-bath of hot water, with the addition of a tablespoonful of flour of mustard, is very useful when there is fulness of the vessels of the head, continued sleeplessness, or obstinately cold extremities.

A modified kind of shampooing—consisting of friction over the skin and kneading of the deeper textures, muscles, and joints—is a very useful proceeding to remove the stiffness and immobility and the sense of fatigue after slight exertion, often experienced. This process will often remove the pains in the loins besetting elderly people, as well as impart elasticity to the limbs and agility to their movements.

A tranquil mind, well-selected and arranged diet, moderation in the use of wine and other stimulants, exercise short of fatigue in favorable states of the weather, confinement to a warm house in cold or wet weather, well-warmed and ventilated sleeping apartments, clothing adapted to the seasons, maintenance of the animal heat of the body, particularly of the lower extremities, careful avoidance of external influences

tending to produce disease, malaria, and the like; judicious bathing, to secure a healthy skin—these are the principal points claiming the attention of aged persons, even when enjoying the best health.

To these must be added immediate recourse to the physician when any overt disorder or suffering is experienced.

My purpose is not to teach elderly people to treat themselves when ill, but to deal with infirmities besetting them, which are generally borne without an effort to obtain relief, being regarded as either too insignificant or as inevitable and irremediable evils. In some instances, such conditions or changes in the system as would be sure to bring, in a longer or shorter time, disorders and fatal disease if neglected are shown to be amenable to simple and easily-employed measures.

The question may now be asked, whether there is any probability, or even possibility, of the discovery of a physical agent capable of completely arresting the changes in the system constituting ageing, or preserving the integrity of the body and all its parts with the vigor of youth and middle age up to the extreme limit of life.

This question is by no means an idle one. If, a few years since, it had been asked whether it were possible for any thing or process so entirely to suppress feeling that the limbs could be amputated without pain, such a question might well have been deemed visionary, and treated with contempt. But the use of anæsthetics has now been practised so long that their effects cease to excite our wonder, although they are really most wonderful. Not one or two agents with this property, but many, are now known.

Scientific ideas run long in grooves. When a new line is struck and followed, most unexpected discoveries are made. Inferences from analogy are easy or obvious; yet they are often most prolific in results. Inoculation of small-pox led to the discovery of vaccination. When the nature and properties of such agents as the ethers, chloroform, chloral, and its hydrate, are considered, together with their history and the manner in which they became known, we are greatly encouraged to hope for the discovery, at no distant period, of an agent which shall effectually stay the changes in the system incident to age,—in short, arrest the progress of what we call decay. Whether the mineral, vegetable, or animal kingdom will furnish it, we cannot foretell. Our knowledge of the action of vegetable products on the human constitution, extensive as it is, is yet only of a minute proportion of the whole. Vegetable substances exert a wide and various healing influence. Opium, foxglove, colchicum, belladonna, tobacco, tea, etc., etc., are to a certain extent known. Thousands are partially recognized; but who shall say what future experiment may bring to light?

It is, however, rather to a comparatively new class of bodies we look as the most probable source of the great desideratum. The chemistry of ternary and quaternary compounds, formerly designated organic chemistry, presents us with what is practically an illimitable number. To this class of substances belong the most energetic and manageable anæsthetics; and either by enlightened inquiry, or as the result of some accident, it is almost certain some of them will be found to exert a powerful action on the living system. Already, out of the line of anæsthesia, or narcotism, we have one of these artificially prepared substances, which promises to be a remedy for that habit of body termed the gouty diathesis—a condition so very frequently issuing in overt and fatal disease.

By the combined aid of physiology and chemistry we are approaching very closely to an exact knowledge of every kind of material (proximate elements) forming the human body—their exact constitution, composition, and mode of formation. Some of them can be made artificially in the laboratory—a certain proof of science being on the right track. We may, therefore, look with confidence to these sciences to investigate completely the changes induced by diseases which are most frequently results of the intrusion of foreign substances with the air, water, or food into the processes of formation, sustenance, or decomposition of the natural compounds. The changes in ageing are consequently not beyond our reach; and it is probable that a rational and scientific basis will be laid ere long for completely arresting them.

Whilst great energy and vast sums of money are expended on experiments in mechanics, electricity, etc., the means of arresting disease and prolonging life are left to hap-hazard individual efforts, seldom or never rewarded.

Jenner's case is singular. Philanthropy is in complete subjection to fashion and precedent. Still I feel assured if the public could be brought to apprehend the prospect of success by investigations instituted with the object of discovering the means of prolonging human life, pecuniary aid would be forthcoming. It is only by well-concerted efforts, and having definite ends in view, that our present science can be made available for the purpose. Its processes are very costly, both in time and money, but in a country where wealth so abounds, the latter ought not to be the obstacle. There are men, too, quite capable and qualified, but they are necessarily engaged in other pursuits, whilst most erroneous ideas on the subject generally prevail. At some future time the indifference and neglect of the present will excite remark and wonder.

In the meantime we must proceed in another direction, guided simply by experience and such analogies as may be found and accumulated by observation. Much has already been done, but very few have the full benefit of the knowledge already obtained.

A healthy and vigorous state of every part and every organ is essential to the health and well-being of the whole system. And as ageing—or what is the same to our means of observation—begins sometimes locally, and sometimes over the system generally, we first look for the local degeneracy, and, finding none to call for special remedies, we address ourselves to the entire system. We have many and most valuable agents capable of invigorating and imparting tone to the whole. And these, judiciously selected and combined, and administered with a full knowledge and control over the diet, regimen, and habits of a patient, will greatly ameliorate the effects, if not retard the advance, of ageing. He must have had little experience who has not seen this influence exerted by well-selected remedies.

Miscellaneous.

THE CHAMBER OF LIFE INSURANCE.—The report of the Committee on Medical Examinations and Examiners, of which Mr. Bewley, of the *Universal*, is chairman, was read. It was able and thoughtful, its chief feature being the recommendation that the companies unite in each prominent locality upon the most competent examiner, and employ him exclusively. Action upon this report was deferred until the next meeting in October, for which meeting it is set down as first in the order of regular business, the companies meantime being requested to give it a careful consideration.—*The Chronicle.*

Original Lectures.

CLINICAL LECTURE ON FIBROUS ANCHYLOSIS, CHRONIC SYNOVITIS, ETC.

By LEWIS A. SAYRE, M.D.,

PROF. OF ORTHOPÆDIC SURGERY IN BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK CITY.

Phonographically reported for THE MEDICAL RECORD.

GENTLEMEN: The first case that I bring before you today is this girl, who has been suffering for some time from fibrous anchylosis at the hip-joint.

This form of anchylosis in many cases very closely assimilates bony anchylosis. It is important, therefore, that you should be able to distinguish one from the other with great certainty, for the management of the two conditions is conducted upon entirely different plans.

In those cases which most closely assimilate bony anchylosis—for it is in such that differential diagnosis is most difficult—if movements are made at the joint, and any motion whatever is secured during the manipulation necessary to a thorough examination of the case, it will be followed by more or less of pain within twenty-four hours. This is a distinguishing feature of cases of *fibrous* anchylosis.

For when bony anchylosis is present, no movements at the joint can be made, consequently pain will not be produced at the point of anchylosis. This rule you will find to be reliable. The subsequent occurrence of pain in and about the joint, even if there be no apparent motion, will justify you in resorting to measures calculated to give to it gradual restoration of motion.

In the case of this little girl, it was exceedingly difficult to determine whether any motion whatever was remaining at the hip-joint, so firmly flexed and adducted was her limb. But the day following the manipulation considerable pain was present, and other evidences of inflammatory action were quite well developed. The limb was placed at perfect rest by placing the child in bed. By the rest in bed and continued application of cold to the inflamed parts by means of icebags, an extension in the line of deformity gradually changed towards the normal. All inflammatory action was subdued within a few days, and then she was placed upon this instrument, which had been specially devised to meet the indications in her case. The instrument consists of a pelvic belt, with perineal bands; a long bar with a foot-piece and adjustment for extension; a knee-cap and a movable joint opposite the hip for flexion, extension, and abduction. At the movable joint arrangement is made so that, by means of screws, abduction and rotation of the limb outwards can be effected at the same time. It is, in short, a modification of Taylor's long splint, the modification consisting in the use of screws for obtaining abduction and rotation. It has now been one month since the instrument was applied, and the change which has been produced during that time is very marked. The limb has been abducted to such an extent that it is now nearly parallel with the opposite limb. This can be ascertained only by placing the pelvis in a fixed position. Rotation has been almost perfectly restored, and flexion and extension have been restored to considerable extent. Abduction and adduction are quite free, and the limb is upon the highway to complete recovery.

The case well illustrates what extraordinary results can be obtained in the way of overcoming muscular rigidity by the application of a constant unremitting force. Under circumstances favoring the application of constant unremitting elastic force, equally as favorable results can be obtained by paralyzing muscular power, thus overcoming deformities produced by it.

CASE II. *Chronic Synovitis.* — This patient, as you see, is a man of medium size, exceedingly muscular, and forty years of age.

Some seven or eight years ago, while wrestling, his foot caught against the edge of a board in the floor, which was slightly elevated above the others, and the quadriceps muscle being placed in a condition of powerful tension, luxated the patella upon the right knee inwards, and he fell. While attempting to raise himself, the muscle restored the patella to its proper position. For a few days he was unable to walk, but in a short time recovery, as was supposed, was complete.

About two years after the occurrence of this accident chronic inflammatory action was set up on the opposite knee, and soon affected both knees; they gradually increased in size, and now, as you see, they are immense. One measures eighteen, and the other seventeen and a half, inches in circumference, and the calves of the legs are very much diminished in size.

For the last two years this condition has remained about stationary. The effusion is now so abundant that the patella of each knee is lifted from its articulation, and as pressure is made upon it, it can be made to strike the bones below with an audible *click*.

By transmitted light a lake of fluid can be seen below the ligamentum patellæ, with a large collection of semi-gelatinous material at its upper surface, presenting a very beautiful pathological appearance. These knees have received an almost endless variety of external applications, and his general system has received a great amount of medication, but all have failed to produce any change, and we now find them as they have remained for a number of years.

The effusion in this case has become so great as to preclude all possibility of its removal by absorption, simply because the excessive tension that has been made upon the absorbents has paralyzed their action in such a manner that absorption cannot take place.

The condition is analogous to that occasionally seen in ascites, when the pressure is so great from accumulated fluid that the absorbents will not respond to the influence of internal remedies. In that case, the removal of only a small portion of the fluid will in many cases reduce the tension sufficient to permit the subsequent removal of the remainder by the renewed action of the absorbents. This case, however, has been of so long standing that it is not probable that the removal of a portion of the fluid would be of any benefit, even though followed by the most constant and powerful compression.

In most cases, particularly in the sub-acute and earlier chronic stages, decided benefit can be obtained by pressure applied to the joints. This can be conveniently and effectually done by means of compressed sponge. Cover the joint which is the seat of the synovitis with compressed sponge, and retain it in position by means of a roller bandage. The sponge is then wet with warm water, which causes it to gradually expand and thus produce an equal amount of pressure over all the parts covered; and it can be kept up as long as may be desirable. The sponge can be applied once or twice a day, according to the necessities in the case. Changing it every twenty-four hours is usually sufficient.

The question now arises, What is the best thing that

can be done for the relief of the present condition of this case?

A free incision will permit the fluid to escape, but the risk of exciting an uncontrollable inflammatory action would hardly warrant such a procedure.

What I propose to do in this case is to remove the fluid by means of the *aspirator*. This, also, is not altogether a safe operation, for inflammatory action may follow its performance; but, under the circumstances, it is the best operation that can be resorted to. In such a case as this, a certain amount of risk must be taken, no matter what operative interference may be adopted.

In all probability, simple aspiration will fail to give any permanent relief, for the reason that the case has been of so long duration. It is also altogether probable that the synovial membrane has become changed in its anatomical structure to such an extent, that permanent benefit will only follow the adoption of some more active measure.

There is a chance, however, that the simple operation of aspiration, followed by elastic pressure, such as obtained by the use of compressed sponge and a roller bandage, may accomplish a cure.

If simple aspiration does not succeed, the fluid will then be removed by means of the ordinary trocar; and when removed, the cavity will be injected with Lugol's solution of iodine. This principle of treatment is precisely the same as that which governs us in the treatment of the tunica vaginalis in cases of hydrocele; namely, to excite a new action in the old and changed membrane, by means of an irritating agent; and for this purpose the solution of iodine indicated is much the safest agent to be employed.

In either case the patient will be placed in bed immediately after the operation, the knees will be firmly bandaged, locked in a perfectly immovable apparatus, elevated above the level of the body, and perfect rest maintained. In addition, icebags will be constantly employed if necessary. The object is to retain the inflammatory action *just within* the point of danger. In this manner we may reasonably expect to bring about complete recovery.

Case III. *Cancer of Lower Lip.*—These growths, seen not infrequently upon the lower lip, are usually regarded as cancerous in nature. Some of them are not. Some of them bear so close a resemblance to the ordinary epithelioma of the lip, that they cannot be distinguished from each other by the naked eye. They are usually the result of constant and long-continued irritation.

Fortunately there is one plan of treatment best adapted to them all. Remove them with the knife, and that makes an end of them.

There are some steps in the operation which are necessary to be observed if you would make a nice operation, and one which will prove satisfactory to your patient. The ordinary operation is to remove the diseased mass, by making a V-shaped incision, large enough to embrace the whole of it.

Serious hemorrhage can be avoided during the operation by having an assistant make pressure upon the facial arteries as they pass over the ramus of the lower jaw. The wound can be closed by means of sutures, or pins with the figure-of-8 suture. I commonly employ the pins. These are to be passed through the lips of the wound, and then its edges are brought together in such a manner as to avoid leaving any notch in the free margin of the lip. The attachments of the cheek may be loosened with the knife if necessary, in order to give more opportunity for perfect adjustment. Two pins are usually sufficient. After the pins have been adjusted and the sutures twisted about them, do not neglect to place a piece of adhesive plaster beneath the point of the pins to prevent irritation and excoriation. Next, long narrow strips of adhesive plaster are to be adjusted in a manner to give support to the pins in holding the lips of the wound in coaptation. These strips, passing above and below each pin, should be carried far back upon the sides of the face and neck. Carefully adjust the edges of the wound a second time, as the plaster is carried over them. The pins are to be removed within 48 hours at most after the operation. To do this without disturbing the wound, seize the pin at the head with a pair of pincers, and carefully turn it round once or twice before making the least traction. With this precaution the pins can be withdrawn without disturbing the threads or plasters, which together with the crust, are left remaining, and should not be removed for some time. Unless the pins are removed before ulceration and suppuration have been established about them, scars will be left at the points of insertion and exit; but with this precaution scar can be avoided.

Case IV. *Ingrowing Toe-nail.*—Here, gentlemen, is a case which belongs to the every-day practice in surgery. It is important, therefore, that you should understand how to manage successfully such little cases. Almost any one can cut off a limb, but it is not every professed surgeon even who successfully manages these painful cases of ingrowing toe-nail. It is quite fashionable, especially in cities, to recommend these people to go to some *specialist*, who "knows all about corns, toe-nails, etc.;" and one of these cases is scarcely ever met here but what has been more or less treated by that class of men. Narrow-soled shoes and boots are the great prolific sources of this difficulty. A great many people imagine—and we are sorry to be obliged to say that the greater proportion of this class is made up of ladies—that a narrow foot and high instep are elements of beauty. The result, however, of these efforts to distort the foot is, the toe-nails cut their way into the tissues, and the tissues become hypertrophied. The appearance very commonly presented is a large mass of fungous granulations rising up from the side of the nail, as you can see very well illustrated in this case.

The toe cannot be cured until this redundancy of flesh is gotten rid of. Sometimes it becomes necessary to employ the knife in the removal of this superfluous growth. Nitric acid is a very good application, and nitrate of silver is another.

Immense relief can be afforded by applying a few threads of cotton beneath the cutting-edge of the nail, in such a manner as to protect the excessively tender tissues from the irritation produced by being crowded in contact with it. When the cotton is properly applied, pressure upon the ball of the toe will give no pain. The proper instrument with which to apply it is a narrow thin knife-blade without cutting-edge. With this instrument draw a few threads of cotton down between the nail and the mass of granulations, and so on until they are carried beneath the cutting-edge of the nail. This operation will give some pain during its performance, but the relief which will be afforded by it will be most marked. After the application of the cotton, pencil the fungous granulations over freely with nitrate of silver, or with whatever may be used for the purpose of destroying them. Repeat the application as often as the destroyed tissues separate, until the exuberant growth is all destroyed.

Case V. *Fracture of the Forearm, Phlegmonous Erysipelas, and Inflammation of Wrist-joint.*—The next case I present to you, gentlemen, is one of consider-

able interest. This man first suffered from a fracture of the forearm. Phlegmonous erysipelas attacked the limb a short time after the accident; and you will here notice the many openings which have been made for the free escape of pus, numbering, as the house-surgeon says, thirteen. The wrist-joint has also become involved in the inflammatory process. The case was one set down for amputation, but I resolved to make an effort to save the limb.

The difficulty involving the wrist-joint was the chief obstacle to be overcome. The thing desired was to place the joint perfectly at rest, and at the same time remove all pressure from the articular surfaces. How was this to be done? Take a piece of sole-leather, long enough to reach from the digital extremity of the palm of the hand to near the flexure of the elbow, and wide enough to half or two-thirds surround the arm. Dip it in cold water, and make it thoroughly flexible. Cover it with a piece of adhesive plaster, plaster side out, long enough to go completely around it lengthwise, and lock. Now, having covered each opening with a piece of oakum, apply the leather-lined plaster to the palm of the hand, mould it, and secure it with a roller bandage as far as the wrist. Having arrived at that point, grasp the hand already covered, while an assistant grasps the arm near the elbow; then making extension and counter-extension, until the patient tells you that all pain is relieved, bring the remainder of the leather-lined plaster against the forearm, and secure it with a continuation of the bandage. In this manner all pressure is removed from the articular surfaces, pain is relieved, and an apparatus is afforded which retains everything at perfect rest. It is almost impossible to devise any means for meeting the indications in this case which is simpler than this. The leather is much better adapted to such uses than a board, for the reason that it can be more perfectly moulded to all the inequalities of the limb. The plaster lining holds it securely in position, in such a manner as to prevent slipping. Since the application of this splint the œdematous condition of the limb has passed away, and the question of amputation is no longer present for consideration.

DERANGED MENSTRUATION

FROM IMPERFECT DEVELOPMENT OF THE REPRODUCTIVE ORGANS AND DISEASES OF THE GENERAL SYSTEM.

By PROF. ALEX. J. C. SKENE, M.D.,

LONG ISLAND COLLEGE HOSPITAL, NEW YORK.

GENTLEMEN:—In girlhood the reproductive organs simply exist. They perform no function, and rarely suffer from any disease. It is not until the individual is matured that the attention of the vital forces is directed to these organs. Until then the young girl knows nothing, or should not know anything, of the nature or functions of this portion of her organization. But just as soon as she has attained to something like complete formation as regards size and shape, the pelvic organs undergo what has been already described as secondary development, and their functional activity begins. This occurs in accordance with the universal law which is observed throughout the whole vegetable and animal world. As soon as the plant or animal has attained its growth, the function of reproducing its kind comes into play.

In those glandular-looking bodies, the ovaries, an ovule is matured, and finds its way into the upper end of the reproductive canal. At the same time the vital forces direct special attention to these organs. This is manifested by greater excitability of the nerves, and an increased supply of blood to the part. The uterus stands prepared with accommodations and plastic material to build this ovule up into a human being. If impregnation occurs, then utero-gestation goes on and the function of reproduction is completed at parturition. If impregnation does not occur, then the blood sent to the uterus is uncalled for. There is no new growth in the part to utilize the increased supply of material. In this engorged condition of the uterus, with no demand to relieve it, the smaller blood-vessels of the mucous membrane rupture, and hemorrhage occurs. Then we say that the patient menstruates, has her catamenia; or she may tell the doctor that she has her courses, periods, periodicals, sickness, turns, or feels poorly.

You will find in your books long chapters on the nature, cause, and character of this menstrual flow. Some call it a simple hemorrhage, and others claim that it is more of the nature of a secretion. Judging from the outward appearance of the menstrual fluid, we may safely call it blood slightly diluted with the normal secretions of the mucous membrane of the uterus and vagina. We might suppose, however, that the blood which is prepared and sent to the uterus for the purpose of nourishing the embryo, would differ in some of its constituents from ordinary blood. If so, then the menstrual fluid would contain elements peculiar to itself. The supposition grows more probable when we remember that, if the catamenia fail to appear from causes other than pregnancy, the general health suffers. The retention of the menses has a poisonous effect, some would say. All this, however, is only speculation; and it is far more important for us practical men to understand the laws which govern menstruation, and the nature and cause of its disorders.

We are told that very extensive observations show that menstruation begins at all ages, from twelve to eighteen; and that while in most cases it returns every four weeks, and lasts five or six days, still, within the bound of health, there are great variations from these rules. The truth is that there is a great difference among healthy females, but each person is generally guided by definite habits in the performance of this function. We must not seek for laws which will govern all persons in menstruating, but rather take those rules which apply to each individual. Most of you will remember facts better than figures. The following rules ought to be borne in mind, because they are useful in practice:

1. Menstruation should occur at puberty, *i.e.*, when the individual is physically mature, no matter what the age may be.

2. It should recur at regular intervals, say about every three or four weeks.

3. The flow should continue a definite length of time, at least varying but little.

4. The quantity should be about the same each time.

5. It should be uniformly fluid in character and sanguineous in color.

While we find great variation among individuals, each person ought to be regular as to recurrence, duration, quantity, and character of menstruation.

Keep these facts in mind; they will aid you in diagnosis, both in functional and organic uterine diseases.

There are certain conditions necessary to the performance of healthy menstruation. These are:

1. Maturity of the individual.

2. A normal development of the reproductive organs.

3. These organs must have a sufficient supply of healthy blood.

4. The nervous system presiding over the action of these organs must afford a normal influence.

If any of these requisites be partially or wholly wanting, then menstruation must be materially affected. There are so many ways in which this process may be directly or indirectly affected, that it would be impossible to even name them all. It will suffice for practical purposes to consider the more common causes of deranged menstruation. These may be grouped under two heads:

I. Undeveloped or malformed reproductive organs, and lesions of these organs.

II. Affections of the general system.

Under the first head, we find these organs immature —they remain through life in a rudimentary condition. And one or more of the organs may be entirely absent; the uterus or ovaries may be wanting. Again, the form and size of these organs may be normal, but the uterus o· vagina may be occluded.

Under the second head may be briefly classed all diseases which decidedly impair the general health; such as the more important organic affections, and all serious blood diseases.

Turning to the first group of conditions causing defective menstruation, we find a necessity for a subdivision:

1. When from defective organs there is no effort made to menstruate. When the uterus or ovaries are absent or imperfectly developed, the external manifestations of maturity or womanhood do not appear. She either remains to all appearance a girl, or becomes masculine in character. The same may be said of cases where all the organs are present, but they remain in a rudimentary form.

2. When all the conditions necessary to menstruation are present, and the flow does not occur. In this class all the signs of the existence of the generative organs appear; the patient has all the symptoms of menstruating, except the flow. While the hemorrhage occurs, it fails to escape, owing to occlusion either of the uterus or vagina.

The point of interest which you ought to remember in this connection is the distinction between deficiency of the generative organs, and obstruction at some point in the reproductive canal.

Regarding the first of these, or imperfect development, they are rare to begin with, and in most of them our duty ends when we have made a correct diagnosis. When any of the organs are wanting, we cannot cause their formation; hence treatment is useless, and must be left out of the question. When the organs are present in a rudimentary state, we are advised to employ treatment, in the hope of inducing the completion of development. Thus we can stimulate the uterus by the introduction of the sound and sponge tents, the local use of electricity, cupping, blistering, etc. But these will all fail, in some cases at least, and the reason why will be explained by the history of this specimen of ovaries, uterus, and vagina. You see at a glance that they are all rudimentary, like those found in girlhood, though they were taken from the pelvis of a lady 32 years old.

The history of the case is this: Dr. Andrew Attersen kindly invited me to be present at the *post-mortem* of a lady, a member of a family he had long attended. The doctor told me that he had known this lady from her youth up. She was known to have female external organs of generation, but had never menstruated. Indeed, when the period came for her to be transformed from a girl into a mature woman, she became quite masculine in appearance. In place of her mammary glands becoming developed, they remained rudimentary, exactly as in the male subject. Her beard grew black and heavy; her forehead got bald; and though she dressed like a lady, she walked like a man. She was attacked with apoplexy, and a physician near by, who was called in to see her, concluded at once that she belonged to the masculine gender. She never rallied from the attack, but died in a short time. *Post-mortem*, we found all the reproductive organs present, but only in the rudimentary form, as you here see them. A careful examination of the ovaries explains why the organs remained in this imperfect state of development. The ovaries are deficient in their essential element, the graafian follicles. These follicles develop the ovules, as you know, and the maturation of the ovule is the starting-point in the secondary development of all the other organs. They give the first impulse. The very first link in the chain is wanting in this case. The graafian follicles and vesicles, which are absent here, are the all-important elements; the other organs are all secondary to them. Practically, then, this subject was without ovaries.

In cases coming under the second subdivision, or obstructive condition, we are called upon to employ active treatment; and in general we may relieve such patients promptly and permanently. When puberty has come, aud the patient has had all the subjective symptoms of menstruation, these being followed by excessive fulness, weight, pain, and distress in the pelvis, we may suspect obstruction. A physical examination will give the evidence of an accumulation in the pelvis; and if we still have doubt as to its nature, the use of the exploring needle will complete the diagnosis. The treatment, as will be readily understood, consists in removing the obstruction, wherever it may be; and when the accumulated fluid has escaped, to keep the part from closing again.

When great distention has occurred, either of the uterus or vagina, from the accumulation of menstrual fluid, there is generally marked disturbance, and occasionally severe inflammation of the pelvic organs. This is not always relieved when a free exit is established. On the contrary, the opening made to permit the fluid to escape occasionally sets up inflammation, and free suppuration follows, and at times even septicæmia or pyæmia. But fortunately such cases are rare.

Far more common, and hence more interesting to us, are those forms of menstrual disorder due to diseases of the general system. It may be stated as a general rule, that any important constitutional affection which reduces the strength a long way below par, will affect menstruation. This is most certainly the case when the general depression continues for a long time. Without attempting to name all the diseases which may cause either arrest or derangement of menstruation, I will simply mention phthisis pulmonalis. In the advanced stages of this disease, the menses generally stop altogether. The uterine function ceases under these circumstances, simply because the system is unable to sustain it. It is a conservative, economical tendency on the part of nature to drop this function of the uterus, because it is not immediately essential to the life of the individual. Now what occurs in phthisis may take place in any of the low forms of long-continued disease. In acute diseases, such as

pneumonia or typhoid fever, the menses may be interrupted for a period or two, but usually reappear when the constitutional disease subsides. On the other hand, in the degenerative diseases, such as organic affections of the heart, liver, lungs, or kidneys, the menses often become irregular and scanty, and finally stop altogether during the remainder of the invalid's life.

The diagnosis in such cases is, as a rule, easily made. By the time the uterine function is disturbed, the constitutional disease is so far advanced as to be recognized at a glance by any one at all skilled in diagnosis.

The treatment of menstrual derangements under these circumstances may be disposed of in a word or two. Remembering that it is a wise provision on the part of nature to drop the uterine function, because unable to sustain it, we see at once that it would be unwise on our part to try to restore menstruation. This we must keep in mind, because our patients are often very anxious about the absence of the menses, and urge us to give emmenagogues to restore them. We must protect such patients as far as possible from themselves.

The next class of menstrual disorders for our consideration are where the uterine function appears too early or too late; in other words, premature and retarded menstruation. The rule given is, that the menses should appear at puberty; hence if they come before or a long time after, there is something wrong.

Premature menstruation is an unfortunate occurrence, and one that is not uncommon. We cannot make a correct diagnosis by getting the age of the patient. We must judge of her capability to menstruate by her maturity of body. We know that until the individual is mature menstruation should not occur. There are many little girls, however, who begin to menstruate before they are properly developed. The causes of this premature effort of the reproductive function are various. I am inclined to think that bad air, poor food, and hard work may tend to cause premature menstruation occasionally. If I am right in this opinion, the fact may be explained on the general principle observed in nature, that all organic existences, be they plants or animals, placed under unfavorable conditions of life, make stronger efforts to reproduce their kind than those more favorably situated. They appear to feel that there is a danger of losing their hold on existence, hence they make extreme efforts to procreate, and are unusually prolific, According to this view of the matter, poorly-cared-for girls, like stinted plants, run to seed. Another, and perhaps the most important cause of premature menstruation, is deranged innervation. The attention of the individual being abnormally directed to the reproductive organs, they are called into functional activity before the proper time. Among this class you will occasionally find those who are so unfortunate as to have acquired the habit of masturbation. Among the rich—or I ought to say among those who are so poor that they have nothing but money—you will find young girls who do nothing but eat heartily, sleep, and slightly amuse themselves by reading questionable sensation novels. This high feeding and indolence, with unhealthy mental excitement, occasionally beget premature menstruation.

Regarding the management of such cases, I may briefly say, that when menstruation has begun, though prematurely, we use no efforts to stop it. We are limited in our treatment to simply trying to build up the general system of the patient. If overworked and underfed, improve these conditions. If the abnormal conditions are in the brain and nervous system, then these require attention. The mind of the individual should be called away from the reproductive organs, and directed to healthy exercise.

Regarding the next section of this class—retarded menstruation—very little need be said after what has been stated regarding its premature appearance. Imperfect general health from debility occasionally postpones menstruation. On the other hand, great, strong, healthy-looking girls sometimes go on to eighteen or nineteen without any appearance of the catamenia. What is popularly known as "good living," and lazy, indolent habits, produce a sluggish condition of all the functions; and menstruation under these circumstances may be occasionally retarded.

In the one class of cases we try to build up the general health, and in the other we try to excite greater activity of all the functions. When there are regular periodical symptoms of menstruation, a well-marked *molimen*, without the flow, emmenagogues may be given. I shall reserve what I have to say regarding those remedies which tend to produce menstruation till another part of my lecture.

The next form of derangement to be considered is what is known as amenorrhœa. This term, if taken in its literal sense, would not convey the meaning which we attach to it in medicine. We not only apply it to complete suppression of the menses, but we also use it when the flow is scanty. We include under the head of amenorrhœa all those cases where the function of menstruation has been established, but has stopped or is scanty. The causes of these derangements are very numerous, and cannot easily be remembered in detail; but we can readily recall the fact that all exhausting diseases, acute or chronic, generally affect menstruation. In acute diseases, such as typhoid fever or pneumonia, as already mentioned, the menses may be suppressed for one or two periods, and be scanty during convalescence, but when the general health is restored the uterine function resumes its normal activity. The organic chronic diseases which derange menstruation have already been noticed, phthisis pulmonalis being the chief. The rule is, that when the constitution breaks down under any severe disease, the uterine function is held in abeyance. As exceptions to this rule, I may state that in cardiac and hepatic disease we sometimes see menorrhagia, or unnaturally free menstruation. In practice, however, amenorrhœa is most frequently seen resulting from debility without organic disease.

Anæmia, or poverty of the blood, and derangement of the nervous system, are the most common causes of amenorrhœa. We stated at the outset that perfect innervation was one of the necessities to healthy menstruation, and we may as well dispose of that part of our subject before taking up anæmia and its effects on the uterine function.

Whatever greatly disturbs the nervous system tends to produce amenorrhœa. Shock from fear, profound sorrow, over-mental taxation in any form, the fatigue and anxiety of a long journey, will cause suppression of the menses. Menorrhagia may occur under the same influences, but the opposite condition, amenorrhœa, is the more common result of such disturbances. A sea voyage will often produce amenorrhœa, and I presume it does so by affecting the nervous system. We see much of this form of menstrual suppression in this city, where so many emigrants land every year. Strong, healthy young girls, who menstruate quite regularly at home, fail to do so when they get here. This suppression of the menses is most likely to occur if the period

comes on when they are at sea. If they can only get across in the interval between, they are more likely to escape. Knowing this fact, we should always advise our patients to cross the ocean between their menstrual periods, if they possibly can. While, as we have seen, strong mental emotions are liable to interrupt the uterine function, it is interesting to notice how the relation of cause and effect may be changed in such cases. A shock to the nervous system, about the catamenial period, will prevent its appearance; but when the mind has been quieted, the menses ought to return at the following term, and doubtless do so in most instances. There are cases, however, when the suppression of the menses so depresses the mind of the individual as to keep up the amenorrhœa.

The treatment of such cases may be given in a very few words. All sources of mental anxiety or irritation should be removed, and the patient cheered and encouraged. Good wholesome society should be secured as far as possible.

Amenorrhœa from a deficient supply of good healthy blood—in other words, deranged menstruation from anæmia—is the condition most frequently met in practice. The causes which produce anæmia are numerous, but they may be classed under two heads: first, an insufficient supply of proper food; and second, an excessive demand upon the powers of the system. Direct loss of blood, hemorrhage from any cause, might also be mentioned; but the anæmia which is produced in this way generally disappears soon, if the other conditions of health are normal. Hence hemorrhage, unless often repeated, is very seldom the remote cause of amenorrhœa.

The symptoms of amenorrhœa, and the condition of the system accompanying it, are generally well marked. The menstrual flow is either suppressed altogether, or is very scanty and light-colored. In some cases the menses return at irregular intervals, say every six weeks or two months. In others a leucorrhœal discharge replaces the normal fluid. The patient shows all the indications of anæmia. The face and mucous membranes are pale; the eyes are unusually clear and bright; the pulse is small, and often quick and irregular—in popular language, there is palpitation of the heart. The blood is unequally distributed, as evidenced by cold hands and feet, and the sudden flushing of the face upon the least excitement. The nervous system suffers in common with the rest. The patient is often excitable, irritable, and low-spirited. Nutrition is peculiarly affected. The patients are often in good flesh. The appetite is generally capricious, and the bowels constipated.

The diagnosis is easily made, as a rule. The *menopausis*, or change of life, and pregnancy, are the only conditions likely to come in the way: The former may be excluded by taking the age of the patient; the latter often requires more close attention. Pregnancy, where the patient desires to conceal the fact, might be taken for amenorrhœa. Regarding the diagnosis of pregnancy, I cannot here enter into full details, but will give you a classification of the signs and symptoms of pregnancy which may aid your remembrance:

1. Symptoms manifested by the general system.
2. Signs and symptoms manifested by the reproductive organs.
3. Signs and symptoms produced by the fœtus *in utero*.

When the fœtus *in utero* gives rise to the ordinary signs of its presence, then the diagnosis is sure. It is only presumed on the evidence given by the reproductive organs, and these include the mammary glands. The condition of the general system is the point of most interest to us at present. To fully point out the differential diagnosis between pregnancy and amenorrhœa would be tedious for us now, and hard to be remembered afterwards. This much, however, you can easily keep in mind, that in pregnancy the general health is usually good, and the individual shows it; while in amenorrhœa the patient gives evidence of imperfect health, as a general rule.

The treatment of amenorrhœa from anæmia should have two objects in view: first, to restore the normal condition of the blood; and second, to restore menstruation. If the first can be obtained, the second will follow, in the majority of cases. The digestive organs require to be cared for first of all. The appetite is often poor or capricious, the bowels constipated, the tongue coated, and the stomach distressed by taking food. Such conditions are most promptly overcome by giving at the outset a cathartic dose composed of pill. hydrarg. rubbed up with glycerine syrupus rhei aromat., and carbonate of magnesia. This mixture is pleasant, and will often improve the appetite and digestion at once. If there is a decided tendency to constipation, the most satisfactory results will be obtained from a pill composed of quiniæ sulph., ferri sulph., ext. colocynth. co.—about two grains of the first two, and half a grain of the last; with about one-eighth or one-tenth of a grain of ext. belladonna. The aqueous extract of aloes may be used in place of the colocynth. One of these pills, taken before meals, will often give the most agreeable results. The ferruginous tonics must be employed persistently until the health is restored, and much benefit will arise from changing them. I refrain from giving any formula, because you may change from time to time, until you have gone through the list. Chlorate of potash was much lauded in such cases at one time, and I have found it most useful when combined with tincture of chloride of iron. Wine or alcohol in some shape is also recommended in anæmia. A small quantity may be given after meals, but remember that if it produces languor, or in the least impairs the appetite, it ought to be discarded at once. In addition to all this, those of you who practice in malarial regions will require to use quinine and perhaps arsenic. I need hardly remind you that you must include in your treatment exercise out of doors, sunshine, and change of air if practicable.

By faithfully keeping up this restorative treatment, you will succeed in curing the vast majority of your patients. Do not be discouraged if it takes a long time to accomplish the object desired. Amenorrhœa may exist for many months, and after all the menses return and continue normal. We have said that if you restore the general health, the menses will return, as a rule. There are exceptions to this. Occasionally you may get a case where the amenorrhœa persists after all the constitutional troubles have disappeared. Then it becomes necessary to use means with a view to directly excite the uterus to action. For this purpose a number of remedies, known as emmenagogues, have been used. Indeed, years ago, the causes of amenorrhœa were often lost sight of, and emmenagogues were employed as the chief remedies in the treatment of this affection. Such drugs, I am glad to say, are much less used now; they have given place to more rational treatment. They almost all act by producing irritation and congestion of the pelvic organs, and it is not too much to say that they were always uncertain and often injurious. I will not mention these old remedies, because you will not use them very often. In place of such medicines, I have for several years given the chloride of ammonium, in about five-grain

doses, every three or four hours; and I believe that good results have been obtained from it. This agent is one of the oldest remedies named in the history of medicine, and its effects have been carefully studied. It is considered to favor the rapid exfoliation of the epithelial lining of mucous membranes. Now, if this be true, we can understand how it will act well in cases of amenorrhœa—shedding of the epithelium of the uterine cavity being a part of the process of menstruation. This remedy appears to increase the flow when it is scanty, and sometimes to start it when it has been absent altogether. I must acknowledge, however, that we may be claiming too much for this agent; but this much I may say, that chloride of ammonium, in my opinion, will accomplish as much as any emmenagogue, while at the same time it is perfectly safe.

By way of concluding this part of my subject, I may remind you that perseverance is a very important element in the management of such cases. Stick to your patients, and you will always succeed. No matter how long continued the amenorrhœa may be, the rule is that the menses will ultimately be established in a normal condition. There are few exceptions to this rule.

We come now to the last section of this subject—chlorosis. This affection is closely allied to menstrual derangements, and may be legitimately discussed in this connection. The pathology of chlorosis, and its relations to the functions of the reproductive organs, are still involved in some obscurity. The earlier writers on this subject considered chlorosis as an extreme condition of anæmia or amenorrhœa, but more extended clinical observation shows that such is not the case. The points of difference between anæmia and chlorosis are well marked. The pathology of anæmia is simply impoverishment of the blood, while chlorosis is believed to be an affection of the nervous system. This belief is held because of the presence of pain and distress located in the solar plexus, visceral neuralgia, sadness, and nervous derangement, conditions which do not necessarily occur in simple anæmia. The peculiar greenish color of chlorosis differs also from the pallor of anæmia. The latter occurs at all ages, while the former is limited to girls about the period of puberty. The causes of these two diseases are widely different. At least we can almost always trace anæmia to some well-defined cause, whereas chlorosis generally occurs without being traceable to any special source. Treatment also proves the difference in the two affections. Anæmia promptly disappears when we remove the cause and employ the proper remedies; but it is not so with chlorosis, which often proves unmanageable under the most judicious treatment.

With these facts before us, we cannot doubt that chlorosis is a disease distinct from all others; and we must seek an explanation of its symptoms from other causes than those which give rise to anæmia. Years ago, Virchow observed that in cases of chlorosis the heart and large arteries were abnormally small. There appeared to be an arrest of development in the circulatory system. This condition, so constantly found *post-mortem* in chlorotic subjects, led to the belief that it was the true pathology of the affection. Now I do not doubt, on the contrary I firmly believe, that Virchow found this anatomical peculiarity in his chlorotic subjects; but I am not prepared to admit that this condition of the heart and vessels is the cause of the disorder. I rather incline to the belief that chlorosis is the result of amenorrhœa on a system thus peculiarly organized. This view of the matter is taken from the fact that the prominent symptoms of chlorosis are not manifested as a rule until puberty, while the defective growth of the heart and arteries exists before and after that time. Again, the chlorosis may disappear in advanced life, while the circulatory system remains the same.

The diagnosis of chlorosis is easy when one is familiar with the general appearance of such cases.

The treatment of chlorosis is not specific. We might refer to what has been said regarding the treatment of ordinary amenorrhœa from anæmia, merely adding that iron, so beneficial in that complaint, is occasionally useless in chlorosis. More attention requires to be given to the nervous system in this disease. Nerve tonics, including the phosphates, are called for, and ought to be used for a length of time. The fact is that the most judicious treatment often fails to overcome this peculiar affection.

Original Communications.

ON THE USE OF

CONIUM AND CROTON CHLORAL HYDRATE IN THE TREATMENT OF ACUTE INSANITY.

By HORATIO R. BIGELOW, M.D.,

HARTFORD, CONN.

In the year 1871, Prof. O. Liebreich published, in a scientific journal of Rostock, his discovery of the chlorine combination of the aldehyde of crotonic acid—which he called croton chloral hydrate—this compound bearing no relation, however, to croton oil. Its form of white, glistening, small *tablets*, its sparing solubility in water, will readily distinguish it from chloral hydrate. Its physiological action is also different. A sufficient dose will produce deep sleep, with absolute anæsthesia of the integument of the head, muscular excitability remaining unaltered. It does not affect the pulse, or respiration. In cases of acute mania, in which this remedy was administered by Prof. Liebreich,* in the stage of great excitement, there was no constitutional perturbation whatever, the patients falling quietly asleep in their chairs a very few moments subsequent to the administration of the drug, as will be shown hereafter. It is particularly efficacious in the treatment of neuralgias.

In those cases wherein, by reason of cardiac disease, chloral hydrate is contraindicated, it is invaluable, no case as yet having manifested any deleterious effects from its employment.

Prof. Liebreich ascribes its mode of action to the product of secondary decomposition (beruhen nicht auf dem ersten sondern auf dem zweiten zersetzung producte). Combined with an alkali, the first result is allyl-chloroform, a terchloride, which may become converted into bichloride-bichlor-allylene. The terchlorides have reference in time, first to the brain, and then to the spinal cord, to which latter implication is due the respiratory retardation. The bichlorides act on the brain, spinal cord, and medulla oblongata, leaving the muscular structure of the heart untouched, save when given in enormous doses. Mr. Benson Baker, in the *British Med. Journal*, Oct. 25, 1873, thus extols its employment:

* Schmidt's Jahrbücher.

"A. Suffered from facial neuralgia of a most severe character; it affected her hearing and eyesight. She could not rest or take food. She took one grain of croton chloral hydrate every hour. In three hours she was considerably better. After taking three more doses she was entirely free from pain.

"B. Suffered much from facial neuralgia dependent on decayed teeth, and had not been able to take food or sleep for three days. She was ordered croton chloral hydrate, in grain doses, every hour, and obtained great relief after two doses. Six doses removed the pain completely. She slept that night.

"C. This patient suffered from concussion of the spine, caused by a railway accident some years ago. She has had every variety of treatment for the pain she suffers in the spine, and the nerves proceeding therefrom. She took potassium bromide gr. 20, and croton chloral hydrate gr. 1, three times a day, with marked relief and no bad symptoms.

"D. This is a young, dyspeptic, and neuralgic patient, who suffers greatly from dysmenorrhœa. She took two-grain doses when the paroxysm of pain came on, with marked relief.

"F. Has been under treatment for various neuralgiæ for some years. She has had, at one time or other, almost every external or internal therapeutic agent in the pharmacopœia—strychnia, iron, quinia, ammonium chloride, aconite, belladonna, iodine, bromine, blisters, hypodermic injections, galvanism, together with baths and other hygienic appliances, including change of air. In this case two-grain doses of croton chloral hydrate every hour afforded more speedy relief from pain than any of the above remedies. After taking eight grains she was almost free from pain.

"In thirteen patients who have taken croton chloral hydrate, not a single bad symptom has been observed. In grain doses it relieves pain quickly, causes natural sleep, no subsequent headache, or furred tongue. In several cases it acted as a gentle laxative."

Dr. J. Wickham Legg, of St. Bartholomew's Hospital, has used it in forty cases with the most satisfactory results.

From an analysis of cases reported, and from its physiological action, it would seem to be of the greatest service in many cases of acute insanity, of neuralgia, and of that excruciating cephalalgia, dependent upon syphiloma, meningeal effusion, or of intra-cranial exostoses. Chloral hydrate, in any ordinary dose, will often fail to produce any effect whatever, and is unsafe in cases of cardiac disease. The continuous use of conium is frequently attended with alarming conditions. True it may paralyze the active delirium, but I have seen it produce a condition simulating that of dementia. Opium is dangerous in many cerebral pathological conditions. I cannot understand the timidity with which specialists are stricken in the employment of a new remedy, which is eminently capable of relieving the sufferings of humanity. Is it an outgrowth of ignorance, or a stagnation of scientific ambition, with an aversion to sever from old school notions, that causes it?

The manufacture, action, effect, and dose may be tested by each one for himself, while the investigations of enlightened minds are available to any one. One insane asylum of Great Britain has placed upon its index expurgatorius chloral hydrate, because three successive deaths resulted from its use. But were these cases properly sounded for heart complaint (for it is a fact that chloral nowadays is being very carelessly used), and was the medicine understandingly administered? Even were all the requisite conditions complied with, why abolish a remedy which has benefited so many thousands? Carry out the law to its ultimate issue and the pharmacopœia of that institution would be reduced to a dozen innocent inert concoctions. In many of the cases which fill our asylums, and in a large proportion of the cases of nervous irritation, this remedy—croton chloral hydrate—will supersede all others. In puerperal convulsions smaller doses will produce speedier beneficial effects than those of chloral hydrate. It is often of paramount importance in acute mania to produce sleep within a short time, and without affecting the general system. This can be accomplished by Liebreich's discovery in from fifteen to twenty minutes.

The rule by which restless patients in asylums are made to take chloral hydrate at the hands of the night watchman, ignorant of their pathological condition, could be wisely modified by scientific discrimination, and by the substitution, in certain cases, of croton chloral hydrate. It is well known that with some patients chloral hydrate produces a condition of unwonted excitement, delirium, and muscæ volitantes; one such case has fallen under my own notice.

None of all these effects, no excitement, depression, arrest of vital function, or of sudden death, have as yet resulted from croton hydrate; and its trial is certainly a matter of justice and scientific investigation.

In the matter of "Conium" I can supplement the valuable article of Dr. Kitchen, *American Journal of Insanity*, April, 1873, only in referring to cases wherein the drug has seemed to operate adversely.

In 1867, Dr. Manlius Smith, of Manlius, N. Y., summed up his conclusions in a pamphlet printed by the N. Y. State Medical Society, as follows: "The immature fruits of conium are far preferable to the leaves; they may be dried without serious injury, and a very active preparation may be made from them." "The only experiment yet made by the writer, in the investigation in progress, to test the therapeutic effects of the conium, consisted in his swallowing 16 minims of Squibb's fluid extract of conium seed, with a view of arriving at some idea of the suitable medicinal dose. The quantity mentioned, taken about five hours after breakfast, produced marked operative effects in about twenty minutes. The effects manifested were a peculiar sensation of heaviness in the eyelids, and as it seemed some degree of ptosis, and a feeling akin to dizziness, that made it quite unpleasant to retain the sitting posture. There appeared to be no disposition to sleep produced. The effects were at their height in about an hour, and mainly passed away after the lapse of two hours from the time of taking the dose. A moderate meal had been eaten in the interval. . . . Specimens of fluid extract of conium (U. S. P.)—that is, of dried *leaves*—prepared by Dr. E. R. Squibb, and also of fluid extract of conium seed, prepared by the same hands, from the dried, full-grown, but green fruits, were also tested. . . . The results attained were, that the oxalic solution prepared from the fluid extract of the leaves bore dilution with 32 volumes of water; while that from the fluid extract of the seed bore dilution with 224 volumes of water, making the seeds in this case seven times as strong as the leaves. . . . In this series of experiments, Squibb's fluid extract (of leaves) gave a solution bearing a dilution with 20 times its volume of water, Tilden's 1¼ times its volume, and Thayer's 4 times its volume; making the comparative strengths of Squibb's 42, Tilden's 5, and Thayer's 10." In a recent letter Dr. Squibb writes: "I do not think a solid extract, or any preparation made by heat, can ever be trustworthy—certainly cannot have any practically good degree of unformity; neither can the 'succus conii' ever be twice alike ex-

cept by chance, since the plants will yield much more juice at one time than at another, from difference in age and succulency of plants, and from wet or dry weather preceding the collection, thus yielding more or less juice—while the proportion of active principles may remain more constant. The only tolerably uniform preparations are those made from the immature fruit taken at the same stage of growth each time, and carefully dried to a proper extent only, and then used to make a definite proportion of fluid extract without heat. . . . . When conium is needed in a solid form—to be given in pill for example,—if a known quantity of the fluid extract be exposed in a shallow layer upon a plate for twenty-four hours so as to lose the alcohol by spontaneous evaporation, and the remainder be made into a pilular mass by the admixture of any inert powder, the resulting mass will be better than any of the conium extracts made by heat." Only until recently have we been able to use conium with any assurance of the desired result. The old preparations and the "succus" were alike so exceedingly variable in strength, that the drug fell into disrepute. With Squibb's fluid extract, however, the satisfaction has usually been complete, and the very general employment of his preparation attests its value. In its action it is essentially different from croton chloral hydrate. By acting directly on the motor tract, conium produces that muscular exhaustion which induces sleep. It also affects the system more extensively than the foregoing. The pulse and temperature are reduced. Vertigo, dizziness, and temporary paralysis are produced. Perspiration is excited. Vision becomes dim, and the pupils dilated. Mental exertion is an effort. A sufficient dose acts very rapidly, and the acute maniac often finds himself incapable of any exertion in from ten to fifteen minutes after its administration. I apprehend that it exerts no direct primary influence upon the brain; but that the condition of exhaustion caused by the drug acting on the corpora striata is communicated to the sensorium, and thus a sleep reflex to the muscular state is brought about.

It is largely employed in our asylums and very generally commended, no ill effects having been noted. My own experience has not been altogether in accord with this wholesale testimony. I believe that its continued use in acute melancholia, hysteria, and hysteromania, etc., is frequently followed by a condition of prostration, of depression, of mal-assimilation, or of mental hebetude. And while I value it as an occasional remedy in very excited cases, or as an alterative in certain nervous conditions, I could not agree in its long-continued employment. Like chloral hydrate, it is simply palliative; exceptionally only and after a lapse of months does it *cure*. How much was due to the interval of time, and how much to the medicine? Quien sabe? It would seem to be evident that a drug which attained its consummation through such serious physical changes, must be attended with some danger when long continued.

This has been the result in several cases of hysteria, melancholia, and recurrent mania, of which I have notes. In one, depression, want of appetite, and lack of energy manifested themselves; in another, fear; in another, mental imbecility—all of which symptoms disappeared with the cessation of the conium.

MEDICAL COLLEGES.—The winter courses in the medical colleges of this city commence as follows: College of Physicians and Surgeons, October 1; University Medical College, September 30; and Bellevue Hospital Medical College, September 30.

RETRO-PHARYNGEAL ABSCESS; PHARYNGEAL INCISION; EXTERNAL ASPIRATION; CURE.

BY R. P. LINCOLN, M.D.,

NEW YORK.

I WAS summoned in haste to see an infant, five months old, whom its parents thought was dying. On entering the chamber a robust child was found in its father's arms with his head supported against his shoulder, this being the position in which it seemed to breathe with the least difficulty. Its skin was bathed in cool perspiration and was of a dusky color. Two or three short sibilant labored respirations were followed by a comparatively long intermission. Its pulse was 140, and temperature (taken later) 100.5° F. I quickly learned the little patient had seemed to be ill for some three weeks, being very restless, nursing apparently with increasing difficulty till, during the past twenty-four hours, nothing had been swallowed. Its cry latterly had been a high pitched moan.

A homœopathic practitioner had been treating it during this period for "diphtheria."

A closer examination revealed an unnatural fulness on each side of the neck behind and below the angles of the jaw, a little larger on the right side than on the left, and evidently deep seated.

The finger in the mouth detected an elastic tumor occupying the whole pharyngeal cavity, extending above so as to press forward the soft palate, and below so as to encroach perceptibly upon the laryngeal space.

To inspection the mucous membrane of the pharynx was only a little darker than normal, and there was present considerable tenacious mucus. The pharyngeal tumor was at once incised with a properly guarded bistoury, evacuating with a jet more than an ounce of laudable pus, and giving immediate relief to all alarming symptoms.

Manipulation of the tumor on the left side of neck effected its complete evacuation through the pharyngeal incision and its consequent subsidence; a like attempt on the right side was not so thoroughly successful.

A poultice was applied to the neck and a solution of borax, carbolic acid, glycerine, and water ordered to be applied to the pharynx by means of a swab. I also prescribed cod-liver oil, and syrup of the iodide of iron.

Two days later each side of the pharynx gave some evidence of a refilling of the abscess, while externally this was much more manifest. I accordingly made an incision on each side of the pharynx, giving exit only on the right side to a little pus, with no appreciable effect on the external tumors.

Dec. 12th.—Dr. Henry J. Walker saw the patient with me, and it was decided to attempt to evacuate the remainder of the abscess with the pneumatic aspirator. In this manner on the following day I withdrew over two ounces of pus from the right side of the neck, and two days later about one ounce from the left side. Each operation immediately resulted in the complete disappearance of the corresponding tumor.

There was no further occasion for interference in the pharynx, the slight fulness that recurred here from time to time being relieved by the aspirator.

Aspiration was performed four times on the right side and three on the left, the last operation being made December 26th, when about a drachm of pus

was removed from the right side. Shortly after this the patient was pronounced well, having recovered without any disfigurement of the neck, where, under ordinary methods of procedure, ugly cicatrices must have resulted.

NEW YORK, August 1st, 1874.

A CASE OF SUCCESSFUL OPERATION FOR RECTO-VAGINAL FISTULA.

BY SUSAN DIMOCK, M.D.,

RESIDENT PHYSICIAN TO THE NEW ENGLAND HOSPITAL FOR WOMEN AND CHILDREN.

MRS. ADELA Q., 22 years of age, consulted me, June 11th, as to the possibility of an operation for a recto-vaginal fistula of sixteen months' standing, so large that the fæces passed exclusively through the vagina. On examination, the fistula was found to extend from just above the sphincter ani, two inches upward, the edges being everted and gaping. The vagina was not nearly so capacious as is usual sixteen months after the birth of a child; and, indeed, the sides of the fistula could with difficulty be approximated. The whole vaginal mucous membrane being in an irritated condition, and the patient being thin, pale, and debilitated, I advised her to wait four weeks, during which time she was put upon the most nourishing regimen of meat, wine, etc. The tartrate of iron and potassa was administered in 2 gr. doses three times daily, and a daily sitz bath given at 99°, as also a vaginal injection of a pint of water at 99°, to which a drachm of alum had been added. During the month the irritation of the vagina disappeared, and the general health of the patient was much improved.

She was accordingly admitted to the New England Hospital for Women and Children on July 13th, on which day I operated, it being seven days after the cessation of the menstrual flow. The bowels were thoroughly moved by castor-oil before the operation, and the vagina and rectum cleansed by injections. The patient being etherized, the sphincter ani was paralyzed by stretching, and the patient placed in the position for lithotomy. I then removed with the scissors all the cicatricial tissue formed at the junction of the rectal and vaginal mucous membranes; but this giving too narrow a surface for union, I separated the rectal and vaginal mucous membranes with the scalpel, thus obtaining a surface three-quarters of an inch in width, without encroaching upon the already scant vaginal walls.* The patient was then turned on the left side and, the posterior rectal wall being held backward by Sims' speculum, the rectal mucous membrane around the fistula was united by five stitches of fine silk, which were tied very tightly, in order that they might slough away. The patient being again placed on the back the vaginal mucous membrane was united by silver sutures, and the wires, which were doubled, fastened upon "quills" three inches in length, made of a flexible French bougie. Seven deep stitches were thus inserted, and afterwards, the edges at the lower end of the fistula gaping, two superficial stitches of single wire were used.

During the six days succeeding the operation, a camphor and opium pill was given each night, and the diet limited to tea, toast, and beef-juice. The vagina was syringed three times daily, and the urine drawn. On the 4th day the vaginal stitches were removed, as the mucous membrane was beginning to ulcerate under the pressure of the quills. On the 7th day, the last rectal suture having been drawn away, castor-oil was given, followed by a large enema of milk. The fistula had completely healed, and the bowels moved freely without any pain or passage of fæces into the vagina. The patient's general condition has been uniformly improving since the operation, and three weeks after, she was discharged well.

The case is interesting as an illustration of a new method of operating, namely, by splitting and turning outward both rectal and vaginal layers of mucous membrane. This method is invaluable where material is scanty, as nothing is cut away except cicatrix.

* The fistula measured after the removal of the cicatricial edge about three inches in length.

Progress of Medical Science.

HYPODERMIC INJECTIONS OF BLOOD.—Considering the difficulties and dangers which are the obvious objections to the operation of transfusion of blood as ordinarily practised, it has occurred to Dr. Landenberger, of Stuttgart, that in many cases a fair substitute for it may be found in hypodermic injection. In one case where he has tried it the result was favorable. It was the case of a patient who was in a condition of collapse following long-continued vomiting, due to some form of obstruction of the bowels. Defibrinated calves' blood was used, and although only eight grammes were injected, the effect was an almost immediate improvement. The patient revived, the temperature rose one degree, the pulse became again perceptible, vomiting ceased, and a certain amount of nutriment could be again retained in the stomach. This improvement lasted forty-eight hours, but was afterwards followed by collapse again. The only cases in which absorption of the injected blood will not take place are those in which the circulation is utterly depressed, as in the asphyxia of cholera, or the very last stages of phthisis, when the injection causes simply a suggillation.—*Med. Corr.-Blatt.*, 20, 1874.

PNEUMOTHORAX FROM IMPALEMENT ON A VINE-PROP.—Dr. Rosenberger, clinical assistant at the clinic of Prof. Von Linhart, in Würzburg, relates the following interesting case:

A youth fell from a tree in a vineyard and struck in a sitting posture upon the end of a vine-prop beneath. He remained for a few seconds impaled there, when the prop broke and he fell to the ground. He drew the stick out himself, which was afterwards found to have penetrated the body to the extent of thirty-four centimetres, and measured at the point five centimetres in circumference, and a short distance lower down, where it was somewhat crooked, nine centimetres. He walked home afterward, a distance of over a mile. The next day he presented himself at the clinic, complaining of sharp pain in the left side. The bowels had moved once since the accident, and no blood had been noticed. There was no pain or other evidence of abdominal disturbance excepting slight meteorism. A physical examination of the chest discovered the signs of pneumothorax of the left side. On the 4th day fluid exudation appeared, which extended to the second rib in front, but then began to subside, the meteorism disappeared, and the patient's condition was quite good. This improvement had continued for 14 days, when he was suddenly seized with violent pain in the left side of the chest, the exudation commenced to reaccumulate and the patient rapidly sank, dying on the 36th day.

The post-mortem examination discovered pleuritis, with offensive effusion, of the left side, together with gangrene of a large portion of the lung. It was then ascertained that the prop had passed into the rectum, perforated the intestine at the beginning of the sigmoid flexure, entered the peritoneal cavity, engaged itself in the omentum, which it carried before it, then crowded the anterior wall of the stomach against the diaphragm, which was perforated, and upon being withdrawn, left the layers of omentum and stomach, that it had carried before it, engaged in the perforation of the diaphragm. It seemed probable also that the end of the stick had slightly wounded the lung, whence arose the pneumothorax. Upon disengaging the wall of the stomach from the hole in the diaphragm, a small funnel-shaped perforation was found in the part of the wall corresponding to the perforation in the diaphragm, from which the mucous lining of the stomach protruded. This perforation is supposed to have been the result of ulceration, and to have been the occasion of the fatal exacerbation of the disease in the chest. The anterior wall of the stomach was not perforated. Upon opening the intestines a cicatrix was found three centimetres above the anus, and could be traced obliquely through the entire thickness of the wall of the bowel. The outer surface of the intestine in this situation had become adherent to the jejunum. The circumstance of the canal through the wall of the intestine having been oblique and valvular undoubtedly accounts for the fact that fæces did not escape and set up peritonitis, and that the part healed so readily.—*Berl. klin. Wochensc.*, 14, 1874.

Treatment of Bronchial Catarrh by Compressed Air.—Dr. Sommerbrodt, of Breslau, reports three cases of bronchial catarrh in which he has used Waldenberg's pneumatic apparatus with remarkably successful results. The cases were all of peculiarly distressing character, with extreme dyspnœa, incessant coughing, and inability to sleep. The patients were in each instance relieved at the first inhalations, and by daily continuance of the remedy the general improvement was decided and very satisfactory.

According to Waldenberg, the inhalation of compressed air relieves the congestion of the lungs by increasing the pressure and amount of the blood in the aortic system, and by hindering the flow of blood into the lungs from the pulmonary artery. It was presumed, in Sommerbrodt's cases, that hyperæmia of the lungs was the cause of the coughing, dyspnœa, and abundant secretion. But the writer is disposed to attribute the sudden and complete relief of the distress to something beside the direct effect upon the hyperæmia. He would suppose that in the above cases there were numerous alveoli to which the access of fresh air was prevented by the clogging of mucus in the small tubes, and hence that these alveoli contained rarefied air, which was the source of a large share of the sensation of distress. This would be at once relieved by the sudden blast of compressed air from the cylinder of the apparatus.—*Berl. klin. Wochensc.*, 15, 1874.

The Treatment of Varicocele by the Hernia Truss.—Hernia or the wearing of a truss have often been assigned as causes of varicocele. But Dr. Ravoth states that in 1,500 cases of inguinal hernia that have come under his observation he has never seen a single instance of well-marked varicocele. This remarkable circumstance not only disposes of the conjecture of any causative relation between hernia and varicocele, but to Dr. Ravoth suggested the idea of a curative one. Amongst these 1,500 cases it is natural to suppose that there were originally a certain number of cases of varicocele, which may have been cured by means of the pressure made by the hernia and truss. Acting upon this suggestion Ravoth has treated 28 cases of varicocele, simply by directing the patients to wear the truss usually employed for inguinal hernia. He directs the truss to be worn during the whole daytime and laid aside at night. For two or three hours the full force of a strong spring is allowed to press upon the spermatic veins at the inguinal entrance, and during the remainder of the day only a moderate, though still perceptible, degree of pressure is maintained. What the *rationale* of the treatment may be is uncertain, but of its success the writer has no doubt. The immediate effect is thus described: "Under this pressure the varicocele is seen immediately, and even visibly, to grow smaller, and whatever pain may have been present at once disappears. This can be explained only by supposing that the circulation in the veins is accelerated; at the same time the testicle is drawn upwards towards the inguinal ring, which is manifestly due to irritation of the cremastes, an effect of no little importance."

The writer also thinks that the same remedy may be found of considerable service in meeting two other indications, viz.: the varicose veins of the legs and "the annoying irritation of the genitals which shows itself in inordinate emissions and onanism." His reasons for this opinion are mainly theoretical, but a certain amount of experience also seemed to justify it. For the treatment of the varicose veins of the leg he directs the pressure to be made just below Poupart's ligament over the vena cruralis at the point of junction with the saphena.—*Ber. klin. Wochensc.*, 19, 1874.

Digestion and Absorption in the Large Intestine.—There has always been considerable uncertainty in regard to the question whether the large intestines are capable of digesting food. This power has been absolutely denied by several authors, as Blondlot, Frerichs, Braune, Funke, and Quincke, while others, as Zander, Schiff, and Eichhorst, have asserted quite as positively that the fluids of the large intestine are able to digest both albumen and starch, the latter being first changed into sugar. Again, in regard to the form under which these substances may be absorbed in the bowels, opinions are also at variance; some claiming that the albumen must be first changed into peptone before it can be taken up, and others that fluid albumen may be as such absorbed directly. A similar diversity of opinion prevails regarding the ability of the intestines to absorb fats.

Some recent experiments by Drs. Czerny and Latschenberger, of Freiburg, throw some light upon these questions. The experiments were made upon a man who, through a malformation, had the anus situate in the left inguinal region, opposite the sigmoid flexure. The rectum was so separated from the intestine above that matters could be introduced into it by the anus, and again washed out by a stream of water from above as from a retort. Various articles of food were thus introduced and experimented with, and the results which were obtained are thus stated:

"*The human large intestine and its secretions have no digestive action upon either coagulated or fluid albumen, nor upon fat.* Coagulated albumen, although left in the intestine for two and a half months, was not appreciably altered, nor was any change effected in fluid albumen in solution. After pouring in an emulsion of fat, the latter rapidly collected at the top, flowing together in large drops. Hence the large intestine not only has no emulsifying effect, but tends to destroy an emulsion already formed.

"The portion of intestine experimented upon absorbed 40 to 50 grammes of water within seven hours.

"*In the normal condition, fluid albumen in solution in water can be absorbed unchanged, as such, by the large intestine, and will be taken up in larger quantity the longer it remains.* Any state of irritation, as, for example, catarrh, hinders absorption or prevents it entirely. Chloride of sodium likewise interferes with absorption, but is taken up itself by the intestine, in spite of an irritated condition and impaired power of absorption. The albumen of the hen's egg is in an unfavorable form for absorption. When the white of an egg is introduced into the bowel unmingled with water only a very slight portion will be absorbed, and the same is true of it, even when beaten into a froth.

"*Fat in emulsion is absorbed by the large intestine, and the amount actually taken up is proportional to the concentration of the emulsion and the length of time that it remains in contact with the absorbent surface.*

"*Starch, when hydrated, is absorbed by the large intestine*, but whether directly as such or after being changed into sugar the experiments did not determine."

It was ascertained that 1¼ grammes of albumen in a 4¼ p. c. solution could be taken up in 24 hours. Since the portion of intestine experimented with was not over one-fourth the length of the whole large intestine, it follows that the latter can absorb 6 grammes of soluble albumen in 24 hours. This quantity, however, is quite inadequate to maintain the nutrition of the body, since 120 grammes is the quantity necessary for an ordinary person. It is presumed that by using more concentrated solutions of albumen the amount absorbed might perhaps be increased.—*Virchow's Archiv*, Bd lix. 2.—*Allg. Med. Cent.-Ztg.*, 49, 1874.

Influence of Chloroform in Labor upon the Fœtus.—Dr. Zweifel, of the Obstetric Clinics in Strasbourg, has recently made some investigations that would seem to imply that the anæsthetic administered to women in labor has more effect upon the fœtus in utero than is perhaps generally admitted. Dubois has made the statement that anæsthesia of the mother causes increased rapidity of the fœtal heart-beats. The writer had often observed an appearance of icterus upon newly born children after the use of chloroform but could not with certainty attribute it to the latter. His attention was first seriously arrested by perceiving in the breath of an infant, born a few hours before, a distinct odor of chloroform. The child had been extracted while the mother was under the influence of the anæsthetic, but since the delivery had lain in a room by itself, where no chloroform had been used. Shortly after this, in order to determine positively whether the anæsthetic was conveyed to the fœtus through the maternal circulation, he instituted the following test: A fresh placenta that had just been expelled by a woman to whom chloroform had been administered for only about 15 minutes, and more than an hour previously, was placed in a close-fitting vessel, having first been cleansed of all adhering clots. The following day when the vessel was opened a decided odor of chloroform was perceived and further examination proved conclusively the presence of the drug. By still another test (examination of the child's urine) the writer was able to establish the fact of the influence of the anæsthetic upon the fœtus. In conclusion, the writer observes that, since the use of narcotics in general are contraindicated in infants, it is an important question for obstetricians to decide, to just what degree anæsthesia may be carried in women in labor with impunity to the fœtus.—*Berl. klin. Wochensch.*, 21, 1874.

Gray Hair.—In discussing the question, whether it is possible for the hair to turn suddenly gray, Dr. Pincus, in the *Berliner klinische Wochenschrift* (No. 24, 1874), admits that under certain circumstances this might take place, while at the same time he rejects most of the testimony on record in reference to this point as entirely untrustworthy. As is well known, Hebra denies the possibility of the hair turning suddenly gray with much positiveness. On the other hand, a distinguished physician of this city, the accuracy of whose observation could hardly be questioned, has borne witness to the sudden appearance in his own person of locks of gray hair in a single night. This, and several other instances equally convincing require something more than simple denial on the ground of the manifest improbability of many similar reported instances.

"The appearance of gray," observes Dr. Pincus, "may be imparted to the hair by three different changes:

"1. The pigment disappears from the external layers of the cortical substance. This is by far the commonest cause of the canities senilis and præmatura. By close observation it will be seen that any single hair in the course of the slow growth of years undergoes repeated alterations in color. . . .

"In advanced canities there is either entire absence of diffused pigment, or it is present only in the outermost layer just below the external envelope. The granular pigment continues to be formed for years.

"2. There occur in all the stronger hairs in the cortical and medullary substance, little interspaces between the separate imbrications. In certain cases these spaces attain an extraordinary size in the central portions. In such cases, if there be only diffuse pigment in the external portions of the hairs, the central portions will alone determine their shade, and the hair will appear gray. . . .

"3. The hair originally was of normal structure and shade, but after a time, *post primam formationem*, the cortical substance becomes split up in places in a multitude of brush-like divisions. These places appear as gray points; if such points lie near each other the entire hair appears gray."

In regard to the question whether either of these three changes may to any considerable extent take place suddenly, he replies that the first two can only occur during the slow process of development, but of the third the possibility of a sudden occurrence is conceded. As usually observed, this third change manifests itself only in isolated spots, and that, too, only in the course of several days. The little imbrications of the cortical substance retain their cohesion in the longitudinal direction, but are split transversely. The separation of the outermost layers can be traced for some distance above and below. Supposing that this splitting may sometimes occur over a considerable extent of the hair, the result would be an appearance of gray. The writer has never actually observed this, but holds that it is not impossible to occur. Allusion is also made to the variations which occur in the fluid contents of the hair. A single hair appears fuller at one time than another. In case the middle layers of a hair lose any considerable portion of their fluids, open spaces result, which fill with air and produce the impression of gray. The possibility of this change also occurring suddenly cannot be *à priori* disputed.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, September 1, 1874.

PUERPERAL FEVER IN BELLEVUE HOSPITAL.

FOR more than two years writers in the daily papers have encouraged the belief that Bellevue Hospital is a charnel-house, and that Dante's "All hope abandon ye who enter here," would be a fitting inscription for the gate through which so much suffering humanity has for years entered to find relief from pain and sickness. It is therefore with much interest that we read the clinical report by Professor Lusk, in the August number of the *New York Med. Journal*, of the lying-in service of this hospital for 1873. This, with the report of Professor Janeway on the prevalence of pyæmia and erysipelas in the same institution, made in the fall of 1862, and which served as the subject of an editorial by us in THE MEDICAL RECORD of Sept. 1st of that year, constitute the only published statement of facts regarding the condition of the hospital during the years 1862 and 1863. At the time referred to we had occasion to regret the absence of such records of surgical practice as one would be led to expect from a hospital of the character of Bellevue, and we therefore refer with pleasure to the fact that for the year past, at least, the lying-in service has not been amenable to criticism in this regard.

We understand that this report for the year is but preliminary to one on the outbreak of puerperal fever, which led to the recent closure of the obstetrical wards of Bellevue, and the transfer of the patients to pavilions attached to the Charity Hospital on Blackwell's Island.

In order to give our readers the facts in this report, we cannot do better than quote from it the following paragraphs:—

"As a large amount of misconception, both on the part of the profession and the public, prevails concerning the lying-in wards of Bellevue Hospital, it has been thought good by the writer to present an accurate tabular history of the service for the year ending January 1, 1874.

"The year in question has been chosen, not because of the peculiarly favorable exhibit it presents, but because during the entire period, a complete record was kept of every woman confined in the hospital from the time of delivery to that of death or discharge.

"These records show a total of 449 patients, twenty-one of whom were confined outside and afterwards brought to the hospital. The annual mortality was twenty-five, or in the proportion of one to eighteen. The number of confinements of primiparous labors and deaths for each month is given in the following table:

MONTHS.	Confinements each month.	No. of primiparæ each month.	No. of deaths each month.
January	33	14	2
February	30	13	4
March	38	26	3
April	28	9	1
May	41	17	1
June	41	18	1
July	30	17	1
August	42	24	1
September	45	15	3
October	33	14	3
November	42	16	3
December	46	26	4
Total	449	209	25

"In comparison with the above, the records from 1865 to 1872, inclusive, report the deaths for each year at 17, 30, 9, 24 (no report for 1869), 31, 33, and 16. Thus it will be seen that the year 1873 was not an exceptionally good one. The increased mortality in 1870 and 1871 is attributable to the closure of Charity Hospital to this class of cases in 1870, on account of its having been visited by a severe epidemic of puerperal fever. This closure largely increased the number of patients seeking admission to Bellevue Hospital, and at the same time the actual though not the relative mortality. As is usually the case, however, the mortality was greater in 1871, the year following the overcrowding, than in 1870.

"The year 1872 witnessed but sixteen deaths. Of these two cases died of convulsions, one of paralysis, one of Bright's disease, and one of peritonitis, developed outside of the hospital, leaving thus a total of eight cases referable to peritonitis or some form of puerperal fever, for which the hospital may be held responsible.

"An analysis of the twenty-five deaths occurring in 1873 shows that two women died from puerperal convulsions, two from rupture of the uterus (one of the patients was brought into the hospital in a dying condition), two from phthisis, one from pneumonia, one from cerebral embolism (patient brought into the hospital twenty-two days after confinement. from street), and two cases of peritonitis, consecutive to labor and

developed before admission. In estimating the influence of the hospital in developing disease, these ten cases may be left out as having no bearing upon the question. There remain, then, fifteen cases illustrating puerperal inflammations, or some form of blood-poisoning, *i.e.*, about one to thirty. Of the fifteen, twelve were primiparæ, of whom six were delivered by forceps after labors of long duration. In three instances the operations were performed by *internes*, or members of the house-staff, and in two of these the application of the forceps was made within the cervix before dilatation was completed, *i.e.*, under circumstances requiring the utmost skill and prudence.

"Death in one instance was due mainly to excessive mental depression on the part of the patient, who had been driven from her home in Michigan, and who felt herself an outcast without hope and without a future.

"Of the three pluriparæ, one suffered intense remorse at having become the mother of a second illegitimate child, another died after giving birth to twins; the third gave birth to her ninth child, after a labor lasting forty-nine hours."

Two cases are mentioned in Table II. as the only women in the fifteen designated who claimed to be married. Now the entire number of married women confined during the year was 240. *Thus the number of deaths from puerperal disease, among the class who furnish the statistics of civil practice, furnished in the hospitals a mortality of less than one per cent.*

"In striking contrast with the above are the thirteen deaths among the unmarried, of whom there were 209 all told. Thus among women whose children were born out of wedlock, the death-rate rose to five and a half per cent. The exact reason for this difference is not very apparent. That it was not entirely due to mental depression is probable from the fact that during three summer months—from the last of May to the last of August—there were no deaths, though during that period fifty-seven unmarried women were confined. The excess of primiparous labors among the unmarried fails to explain the difficulty, as, among the married women, sixty-three were confined during the year for the first time, with the loss of but one life.

"It may, however, be as well noticed here that while many of the patients who come to Bellevue Hospital are callous and indifferent, there are always certain among them who feel their position most keenly. Now any depressing agency is a dangerous element in a lying-in hospital. If, indeed, some means could be devised to provide a future for the better disposed among the unfortunates, and persons could be found to take a little humane interest in their welfare, a great addition would be made to the medical resources of the hospital. Few people realize the appalling mental condition of some of these poor outcasts. Without money, or friends, or sympathy—with the question of death or a horrible career as an alternative before them—it is difficult to keep under control the suicidal propensities of the more desperate. The writer has had continually his attention drawn to cases of peritonitis resulting from patients getting out of bed one or two days after confinement, and walking barefooted over cold, uncarpeted floors, when the nurse, for any reason, happened to be out of the room. In some of these cases the only impelling motive to the imprudence has been a knowledge that it is forbidden."

An elaborate table shows the total number of cases of puerperal disease from which the patients recovered.

"Here, too, the preponderance of disease among the unmarried is very apparent (fourteen out of twenty-two). The cases of convulsions, the case of nephritis, and the two cases of puerperal mania were accidental occurrences, attributable to the antecedents and physical conditions of the patients who seek admittance to a great hospital.

"While the hospital receives so large an amount of wretchedness, absolute immunity from puerperal disorders is unattainable. Even disastrous epidemics are liable to occur under most careful management. The occurrence of such epidemics does not demand the destruction of the hospitals in which they break out, but their temporary closure.

"In Charity Hospital the present condition of the lying-in service is said to be excellent, yet in 1871 it had to be closed on account of puerperal fever. In 1872 there were twenty deaths out of 205 patients at the Nursery and Child's Hospital. The hospital was closed for a time, and the next year there were but four deaths from all causes among the women confined there. Over and over again operations have been suspended at the Woman's Hospital on account of a temporarily unhealthy condition of the atmosphere.

"But what are the means by which all this evil may be abated? It is folly to assume that no reform can be accomplished. Certainly it is unworthy a great city like this not to have a special hospital separate from a general hospital for the reception of lying-in patients. Such a hospital ought not to be an old rookery, purchased to meet an emergency, but should embody the practical results of the studies of the most eminent hygienists of the day. The selection of the site of such a hospital should be subordinated entirely to the interests of the patients. *But when this has been done it will be found that success lies chiefly in the internal economy practised.* An abundance of light and air, plenty of free space, generous diet, plenty of washing, a rigorous discipline maintained in the management, intelligent nursing, and constant watchfulness on the part of the attending physicians, are among the most important means of preventing and suppressing epidemics. *Per contra*, with limited room, ignorant nurses, and lax discipline, fatal results will prevail, in spite of pavilions or the most expensive machinery for ventilation.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 10, 1874.

DR. H. KNAPP, PRESIDENT, in the Chair.

PERITYPHLITIS—OPERATION—RECOVERY.

DR. SANDS presented four small fæcal calculi discharged from the cavity of an abscess, the result of perityphlitis, depending upon ulceration of the vermiform appendix. The patient was a gentleman, aged 41, who was attacked with illness on Thursday, April 23. He left the house to go to his place of business, in his usual health, which was excellent, but while returning home that afternoon he suffered from pain which was diffused over the abdomen. At that time he had nausea and vomiting, and he also felt cold, but did not have any chill. The vomiting subsided after a few hours, as did also the nausea, but the pain in the abdomen continued and became most severe in the right iliac fossa.

The patient was seen by Dr. Ball the following evening, when he presented the symptoms of localized peritonitis in the right iliac fossa. Dr. Sands saw the patient with Dr. Ball on Sunday, April 26, three days after the attack. There was then no decided change in the symptoms. The belly was slightly swollen throughout, but it was not very tense. A tumor the size of the fist could be felt, although not seen, in the right iliac fossa, in the situation of the cæcum. This tumor was quite firm, even, non-elastic, and very sensitive to pressure.

The question arose as to the nature of this swelling, and four different diseases were thought of. It was thought possible by Dr. Ball that the case might be one of intussusception, of internal hernia, of impaction of fæces in the cæcum, or finally, connected with disease of the vermiform process. To the latter diagnosis both gentlemen were strongly inclined. The signs of intussusception were wanting; no bloody stools—in fact, no discharge from the bowels—since the attack. Hernia was excluded because of the disappearance of vomiting after the first day or two.

For a week from the time of his attack the patient presented the signs of peritonitis. This disease at no time was extensive or severe. The temperature ranged from 101°–102°, and the pulse from 90°-100°. The distention of the abdomen increased until the fourth day, and then began to subside. The bowels were not moved until the sixth day, when it was thought best to give a cathartic of castor-oil, followed by an enema. By these means three copious evacuations were obtained, which produced at first a feeling of exhaustion, but the ultimate effect was salutary.

On Thursday, one week after the attack, there was a very evident amelioration of the symptoms. The swelling of the abdomen subsided; there was no tenderness except in the right iliac fossa, and the pulse and temperature became normal. The tumor did not disappear, but there was reason to hope that a cure might occur by resolution. From Thursday until the Monday following, nothing unusual occurred; but on the latter day (the twelfth of the disease) the patient had a chill, marked but not severe, and on Tuesday another chill of the same character. The temperature then rose to 102°, and coincident with this change in the symptoms there was a change in the tumor, which became larger and softer, reaching well up toward the umbilicus and the lower margin of the thorax.

The concurrence of these general and local symptoms was considered sufficient to warrant the operation by incision proposed some years since by Dr. Willard Parker. The operation was performed by Dr. Sands, and an abscess was found and emptied. The abdominal walls were very thick, and it was not until the transversalis fascia was reached that any fluctuation could be discovered. A hypodermic syringe was then introduced into the tumor, and the presence of pus ascertained, when an opening large enough to admit the finger was made and six ounces of fetid pus evacuated. After this opening had been made and the pus had escaped, the cavity of the abscess was explored, all its limits being reached except above. During this examination several fæcal concretions were removed, and subsequently, day by day, as the result of washing the abscess with warm carbolized water, more concretions escaped, making eight or nine in all. The largest of these was equal in size to a large pea, and, on being cut open, was found to contain a nucleus of fæcal matter arranged in concentric layers.

The symptoms were immediately relieved by the operation. The contact of the discharges with the connective tissue produced some sloughing, but this did not interfere with the general well-being of the patient. He recovered so as to be able to sit up on the fourteenth day, and at the time of reporting the case the patient was quite well, and on his way to Europe.

When the concretions continued to escape there was some fear that a fistula might exist, which it would be difficult to close. The sequel, however, proved that these concretions existed in the vermiform process at the time of its ulceration, and that they had merely escaped into the cavity of the abscess.

In conclusion, Dr. Sands remarked that the question had often been asked, when it was proper to perform this operation? The experience gained since the operation was first performed has taught us that not unfrequently cases of this sort terminate by resolution. He had seen two of this kind himself, and had met with a physician who had had two in his own practice. He thought that the signs which were present in this case were the ones which would generally be found to guide us; that is to say, a patient has an attack of circumscribed peritonitis in the right iliac region, from which he recovers under treatment, when of a sudden he is seized with a chill, a rise of temperature, a rapid diffusion of the swelling and the other symptoms of abscess. If he was not mistaken, these were the signs which determined Dr. Parker to perform his first operation. There was no question that the operation should be performed when the proper indications were present, as otherwise death would ultimately result either from the bursting of an abscess into the peritoneum, or by extensive burrowing throughout the abdomen.

DR. JANEWAY had seen two cases of this trouble in which a thrombus of one of the small branches of the portal vein resulted, leading to secondary abscess in the liver.

DR. KNAPP presented a female patient upon whom he had performed an autoplastic operation for rodent ulcer in the lachrymal region. He had exhibited the patient to the Society at the meeting of Jan. 28, 1874 (*vide* MEDICAL RECORD, vol. viii., p. 210), on which occasion he gave a full history of the case. He wished merely to show the results of a plastic operation demonstrating the steps of the same upon the patient. The tumor on the forehead was taken away later, and proved to be a typical specimen of alveolar cancer. A

tumor of the jaw, which, at the time she was previously exhibited to the Society, was supposed to be of like character, was removed by Dr. Sands. That gentleman found it to be a mere cavity in the bone containing matter, but whether it was originally a cyst which had suppurated or a simple alveolar abscess, was not determined. The operation for its removal comprised the *removal* of the shell-wall, the opening being made through the mucous membrane of the mouth.

PACHYMENINGITIS.

Dr. Loomis presented a specimen of pachymeningitis, removed from a male patient, aged forty-three, who was admitted into Bellevue Hospital, June 3. From the friends who came with him it was found that he had been of intemperate habits, given to all sorts of excesses, that he had had gonorrhœa a number of times, and that two years ago he had had a primary sore on the penis which was followed by all the characteristic symptoms of constitutional syphilis. It was further found that he had been able to work every day up to eighteen months before his admission, when he was suddenly seized with paraplegia, which, although only partial, was sufficiently complete to prevent him from going up stairs, and if he attempted to walk very far his limbs gave way and he fell. This attack confined him to his room for about three months, when it suddenly disappeared and he was able to walk as well as ever. Soon after that he began to have convulsions. These were not of an epileptiform character, as at first he did not lose consciousness, but this latter was not the case when the convulsions increased in frequency. About three months before his admission he had severe convulsions in succession, and after these convulsions had ceased he appeared, according to his friends' statement, more intelligent than he had been previously. Three days before his admission he had five convulsions in succession, and had been in a partial state of coma from that time until first seen by Dr. Loomis, a few hours after admission. The patient could be roused to answer questions, but if left to himself would lapse off in his drowsy, stupid state. His hearing and sight were perfect, and there was no facial paralysis. If he was stood upon his feet he would walk without support for a short distance only, when, if the support was not continued, he would fall backward and to the right. There was less muscular power in the right arm than in the left. He could get out of bed himself with very little assistance, and when he was standing on his feet seemed to be much better that when lying down. His pulse was 50, and temperature 97½°. There was no trouble about urine or fæces, and he was able to swallow without any difficulty. He complained, however, constantly of pain in the head and upon the right side. The examinations of heart, lungs, and abdomen were negative. The history of the case, with the persistence of the symptoms, caused the diagnosis of pachymeningitis to be made. The patient was accordingly directed to take three drachms of the iodide of potassium within twenty-four hours, but it was found that he vomited everything, and that the vomiting was projectile in character; medication was accordingly carried on per rectum. Twenty-four hours after admission his coma had very much deepened. He was not more paralyzed on one side than the other, except with the right arm. He gradually sank, and died in a state of coma, his pulse and temperature running up very rapidly towards the last, and the urine being suppressed for twelve hours before death. At the autopsy, the thorax, abdomen, and all the organs were healthy, with the exception of a slight pulmonary œdema and interstitial nephritis. On opening the cranial cavity the right hemisphere was found very much adherent, the dura mater very much thickened, and the corresponding portion of bone much eroded. This thickening extended over a space of about two inches in diameter and two inches in length. Underneath and attached to this thickening was found a gummy tumor, which is firmly attached to pia mater as well. This thickening and erosion extended in every direction from the centre of the tumor, but fading away as it recedes. There was very little fluid underneath the arachnoid; no fluid in the ventricles. In the left corpus striatum were the remains of an old extravasation.

Dr. Janeway referred in this connection to three cases of pachymeningitis, caused by a rupture of one of the large veins going into the longitudinal sinus.

Dr. Knapp, having asked the question of Dr. Loomis whether there was any defects of sight or hearing in this case, and being answered negatively, remarked that neuro-retinitis was sometimes present without much diminution in visual power. He believed that in the great majority of such cases as the one presented, if an ophthalmoscopic examination were made, retinal lesions would be made out.

THE DEATH OF DR. SPRAGUE.

Dr. Post gave a short account of the last illness of Dr. H. M. Sprague, of Fordham, N. Y. Dr. Sprague was in his usual health until the day before his death, when he rode to a public institution not far from his residence. On his way thither he was attacked with nausea and vomiting, and on his arrival he was so decidedly indisposed that he was not able to leave, and died, with gradually increasing coma, within twenty-four hours from the time he was taken. He was not seen by any medical man until shortly before his death, and by the history of the case it was believed to be one of uræmic poisoning.

At the autopsy both kidneys were in such a condition of intense hyperæmia as to make it difficult to distinguish the cortical from the tubular portions. There was a rupture of the blood-vessel in the pelvis of the kidney of the right side. The vessels of the brain were somewhat turgid. The bladder was distended with urine, but did not contain any albumen.

Dr. Loomis thought that the cause of death might have been a congestive chill.

Dr. Post replied that the spleen was not in a condition to warrant the supposition.

EXCISION OF BURSAL SWELLING.

Dr. Post presented a bursal swelling which he had excised from the ligamentum patellæ; also the cast of a foot of a young lady, showing subluxation of the first phalanx of the second toe, for the removal of which he was forced to excise the distal extremity of said phalanx. The bone was easily reached by splitting the tendon, and the wound healed by first intention.

MORBUS COXARIUS.

Dr. Sayre exhibited the upper extremity of the femur of a child, aged six years, who was brought to Bellevue Hospital in January last with a large abscess on the outer side of the left thigh, the result of a kick. When admitted, the patient was very much exhausted, presented all the appearances and gave the history of morbus coxarius. The abscess was opened and gave exit to a large quantity of pus. Nothing more was done for it in the shape of an operation until Dr. Sayre came on duty in May, when the patient was exceedingly emaciated and was in great danger of dy-

ing of the disease. The operation of exsection was performed a month before the meeting of the Society, and the head and neck of the femur were found to be gone, and the upper extremity of the shaft, including the trochanter major, was pushed through the opening and sawed off. A large perforation was found in the acetabulum. The abscess on the outer end of the femur went within an inch and a half of the external condyle, and was opened throughout its entire extent. Up to the time of reporting the case, the patient was doing well.

Dr. S. also presented a second specimen removed by operation from a child only three years of age. In July, 1872, after violent exercise, from fatigue, she lay upon the grass and fell asleep, and was soon after attacked with what was thought to be rheumatism, but which was evidently severe inflammation of the hip-joint. In October following she became so much worse that her foot was drawn up, adducted, and shortened. She remained in this condition for sixteen months. She was brought to the hospital three weeks ago, and at that time there was a large abscess on the inner aspect of the thigh, through an opening in which pus escaped. The abscess was laid open. Although no evidences of crepitus could be discovered, Dr. Sayre felt convinced that the bones were bare and that exsection was advisable. The operation was performed, when the head of the femur was found to be absent, and the neck of the bone very much reduced in size and roughened. The first section was made through the neck of the bone, but it was necessary, in consequence of extension of the disease, to remove an inch and a half more. The patient was on a fair way to recovery.

EMBOLISM OF PULMONARY ARTERY.

DR. NEWMAN—The specimen I present is an embolism of the pulmonary artery; the clot has been removed at the autopsy, which has been conducted with great care by Dr. Briddon. All gentlemen present at the post-mortem were so well satisfied with the cause of death by finding the embolon filling the entire volume of the pulmonary artery and its bifurcations, that it was thought superfluous to examine the cranial cavity. As minute recorded cases of this accident are rare, I take the liberty to give you the full history of the case, followed by Dr. Briddon's notes of the autopsy, and his remarks, to which I can add nothing.

Mrs. E. A. was born at the seventh month of gestation, as one of twins. Her twin brother died, and she was raised with great difficulty and care. Afterwards during her life was healthy, but retained a delicate appearance. She was married in June, 1873, at the age of twenty. She menstruated last Sept. 8th, 1873, when she flooded profusely for one hour, the flow ceasing suddenly. It was thought that conception had taken place Aug. 8th, and the flow of Sept. 8th was considered as a hemorrhage from the cervix. If the supposition was correct, confinement might be expected on May 15th, 1874, at 280 days' gestation.

Dec. 1st, 1873.—Sudden fainting, pain in back and abdomen, extending to the limbs. Dizziness and feeling of syncope. Slight hemorrhage from uterus. Two nights before she had exerted herself dancing, and now the symptoms indicated abortion. Ordered recumbent position, and gave an opiate. After two days' rest she rallied without further medication, and was able to sit up. Rp. Potass. chlorat. grs. viij.; Elixir calisayæ, ℥ ss., was given three times a day for two weeks. After this she took iron for a few weeks. She then enjoyed good health until the end of her term.

May 12th, 1874.—Irregular pains commenced early in the morning, and troubled her the whole day and the following night.

May 13th.—Pains became more regular, and the os began to dilate slowly but steadily. The presentation was vertex; position, L. O. A. The second stage began at 1 P.M.; at 3 P.M. descent commenced. Progress was slow but steady until 5 P.M. At that time the head had advanced into the vagina, and rotation was not quite completed. The pains were regular and strong, but from that time the head made no further advance. At 6 P.M. it was evident that nature would not accomplish the delivery, as the head was too large for the unyielding parts of the primipara. At 7 P.M. chloroform was administered by Dr. Elsberg, and with the kind assistance and counsel of Dr. Chas. A. Budd, the patient was delivered with the forceps of a live and large male child. A small laceration of the perineum was unavoidable. The placenta followed in thirteen minutes. The uterus contracted firmly at external manipulation, and ʒ ij. of the fluid extract of ergot. Patient feeling comfortable.

May 14th.—Patient is in good spirits; has had a good night's rest; passed water without difficulty, and has appetite. Lochiæ normal.

May 15th.—In excellent spirits; good appetite; secretions normal. Has been nourished well since beginning.

May 18th, 5th day.—Took almost too hearty a meal yesterday, and feels a little indigestion. Milk appears and causes feeling of heaviness, but not a marked fever.

May 19th, 6th day.—Feels better. Lactation is fully established, but the breasts are rather flaccid, as if the glandular formation was deficient.

May 20th.—Tongue furred. Pulse 92. Breasts were well drawn, and rubbed with warm olive oil. There is a secretion of milk, but not in the desired quantity, and it seems as if all efforts in that direction would prove fruitless.

May 21st.—Weakness. Pulse 120; tongue furred; no appetite.

May 22d.—Same condition as yesterday. Lochiæ normal in quality and quantity, but have a fetid odor. Involution of uterus going on well. Complains of a soreness in throat, difficulty in deglutition, and a general malaise. Found on examining the throat a redness of the mucous membrane, like a pharyngitis from sudden change of weather. Ordered a gargle of Potass. chlorat. ʒ i. to ℥ i. to be used frequently. Rp. Sol. acid carbolici per atomizer. Rp. Quiniæ sulphat. gr. iv. three times a day. Rp. Acid carbolici ʒ i., Aquæ, Oj., for vaginal injections.

May 23d.—Somewhat improved, but has had no sleep. Pulse 110. Rp. Morph. sulph. gr. ⅛ at night. Frequent gargles urged. Passages loose, frequent, and of a diarrhœal character.

May 24th, 11th day.—Marked improvement; had a good night's rest. Pulse 100. Throat well; appetite better.

Vaginal examination shows that the laceration of the perineum gives no trouble; no sore or ulcerated surface, and no fetid odor. No tenderness over abdomen or on pressure. Skin moist. Is sitting up in a chair a little while for the first time.

May 25th to 27th.—Patient's condition changeable. At times she feels very well, at others has an unusual weakness, which necessitates her remaining in bed. The pulse varies between 86 and 100. Tongue is coated, and appetite capricious. The diarrhœa is gradually getting better. Urine is normal in every way; bladder does not give the slightest trouble.

Rp. Quiniæ in doses as indicated by the pulse.

Takes every night morph. sulph. gr. ¼, after which she always has a good night's rest.

May 30th, 17th day.—Bimanual examination of uterus. The fundus is below the pubes; involution progressing normally in every way. The cervix is hard, well contracted, and stands low in pelvis. Vagina clean, not the slightest odor; all discharges almost ceased; no tenderness on digital examination.

No tympanitis, and not the slightest tenderness over abdomen on deep pressure and percussion. No pain anywhere. Bowels regular. Never had a chill during the whole sickness.

June 1st.—Appetite has returned, and she feels well in every way, with the exception of a general weakness. Examination shows nothing wrong. Is sitting up a little. Pulse still 90.

June 2d, 20th day.—Saw her at 12 M. Very much improved, feels well, and is in good spirits. Everything normal. Pulse 86. Appetite better.

At 2.30 P.M. relished a plate of soup in bed. Got up, saying how well she felt; walked only a few steps from the bed to the lounge, when she suddenly fainted, uttered one scream, and fell on the lounge. Almost at the same moment I was at her side; found her becoming very pale, pulse only 42. The whole skin getting as white as a sheet. The next minute the pulse was 30, and a few parts of the skin changing to a yellowish hue; nails turning blue; countenance of extreme anxiety, changing to facies hippocratica. The eyes alone remaining natural and open.

A few spoonfuls of wine were given, and swallowed with a little difficulty. The pulse growing slower with every moment, the heart fluttering unsteadily. At this moment Dr. C. S. Wood entered, and while we were consulting she expired. From the beginning of the sudden attack until the complete cessation of pulse and heart-beats, not more than five minutes elapsed. She had not complained of anything, nor did she speak a single word. The only motion she made was to raise the left hand and point the finger to the second intercostal space of the left side.

Autopsy by DR. BRIDDON, June 2d, 1874, 9 P.M., in the presence of Prof. Chas. A. Budd, Drs. L. Elsberg, R. Newman, Howe, and C. S. Wood, on the body of E. A., a young married female:

Rigor mortis incompletely developed; trunk still warm; surface pale; integuments of abdomen wrinkled.

Abdominal cavity contained less than a pint of perfectly clear, straw-colored serum; intestines were moderately distended; their peritoneal surface was free from trace of inflammatory action save at a point of the ileum distant six inches from its junction with the colon, where adhesions bound the gut to the right ovary.

All the solid abdominal viscera were sound. The bladder was about half full of urine; the uterus measured four inches and a half in its long diameter, two and a half transverse at the fundus, and anteroposteriorly one and a half. At the fundus were seven small subperitoneal collections of pus, varying in size from the dimensions of a pea to that of a bean. These deposits were aggregated about the cornua or angles, three on one side and four on the other, one encroaching on the broad ligament. There was a rent on either side of the os externum uteri two or three lines in length; the cavity was empty and odorless; the site of placental attachment could be recognized by a slightly granular surface, the internal surface and walls of the organ were perfectly healthy.

The right ovary was the seat of a thin walled abscess containing well-elaborated pus; it was bound down by recent deposit of inflammatory character, and was also adherent to the small intestine; the left ovary was healthy.

The inferior cava, iliac, and their tributary veins from the pelvic viscera, contained fluid blood, but no thrombi that we could discover; everywhere, as far as traced, the lining membranes of these vessels were smooth, glistening, and free from any appearance that would indicate their having been the seat of thrombus for any considerable period of time.

Thorax.—Left lung bound to parietes by old adhesions; surfaces of both were markedly exsanguine; small linear patch of hypostatic congestion at inferior border of right base. The heart was small; left ventricle contracted; right ventricle flaccid; it was almost empty, containing only a very small dark clot entangled in the muscular columns; no defibrinated clot.

The pulmonary artery was completely occupied by a dark-colored dense clot, which could be traced from the summit of the conus arteriosus to the secondary division of the vessel within the tissue of the lung itself; the lining membrane of the main channel was in immediate contact with the clot. This portion of the clot was of a dark maroon color, but that portion that occupied the bifurcation of the artery was nearly of the color of arterial blood; the lining membrane of the vessel was stained by transudation of blood pigment.

Remarks.—During the week that has elapsed since the autopsy was made considerable changes have manifested themselves in the external appearances of the clot. Immediately after removal it was noted that the portion that plugged the artery passing to the left lung was of a bright rosy hue, whilst the larger mass contained in the main trunk was dark in color; soon after removal and exposure to atmospheric air it also became lighter in color, and during the subsequent maceration in dilute alcohol the escape of blood pigment has still further modified the color. I purposely avoided making a division of the clot, so that the members of the Society might judge from the appearance of the fresh section.

I have no doubt that the larger mass was formed before death. It had none of the appearances of the heart clots met with in cases of slow dissolution. My own impression is, that the smaller and lighter-colored clot found at the bifurcation and in the left pulmonary artery, was an embolon originating in a thrombus formed in some of the pelvic veins, and that the larger clot that filled the main vessel had formed in the location in which it was found.

That death was the result of occlusion of the pulmonary artery, I have no doubt, and I think the exsanguine condition of the lungs bears ample testimony of the fact.

One condition met with surprised me. I refer to the flaccid and almost empty right ventricle. It contained but a very small portion of loose clot that was not continuous with that found in the artery. The contrast between the right and left chambers was marked; the left looked as if its last contractions had been tetanoid, it was so firmly contracted.

I think the multiple abscesses met with at the fundus uteri originated in the superficial layer of lymphatic vessels met with beneath the peritoneum.

THE MEDICAL SOCIETIES OF NEW YORK.—The different medical societies of this city will commence their regular meetings during the present month.

DR. W. O. TORREY, of Hannibal, Mo., has been elected President of the Missouri State Medical Society.

New Instruments.

A NEW ASPIRATOR.

By J. A. STEURER, M.D.,

HOUSE-PHYSICIAN TO BELLEVUE HOSPITAL, NEW YORK.

HAVING had considerable experience in the use of the various forms of aspirators, and with a thorough appreciation of their inestimable value, we have constantly been annoyed by several defects in the several forms of instruments until now employed. Stimulated by the desire to possess an instrument which, after answering all the requirements, would be safe in every respect, I was induced to construct an apparatus which, when accurately described with the detailed method of its usage, would, when once understood, no doubt be appreciated by the profession. Formerly I could not suppress the feelings of anxiety for fear of wounding an internal, perhaps vital organ, as I held the dangerous needle, through which fluid was to be aspirated; hoping no pus, shred of mucus or other product of transformation would instantly render my instrument useless and subject my perhaps dying patient to further torture.

What then are the requirements, other than those furnished by the valuable instruments of Dieulafoy, Pontain and others? We have found them principally as follows: First, *there must whilst aspirating be no danger of wounding an internal organ.* Second, and *there must be a means of clearing the canula with the instrument in situ.* Now, after having obtained these, and therefore done away with the danger accompanying the use of the aspirator, we offer an instrument in which the evacuating force can be accurately appreciated and regulated by the operator, hence more acceptable to the patient, and venture to suppose this apparatus at last approaches perfection.

Having given it a thorough trial in a variety of cases, I take the liberty of presenting the aspirator as described in the accompanying figure:

A is a glass cylinder of 8 oz. capacity. B is the piston-rod which works with the rack C, by means of key D.

The rod C can be pushed out, so that the piston can be worked as in an ordinary syringe.

G is a stop-cock at the inlet, and G′ one at outlet.

The cylinder A is connected with the little apparatus F, by means of a rubber tube K, with unusually thick walls to prevent collapse when a vacuum is made.

The trocars, I, are screwed on the rod E, which is placed in the tube F, and passes through the cap J, which contains a rubber packing, so that the more the cap is screwed down the tighter the packing becomes.

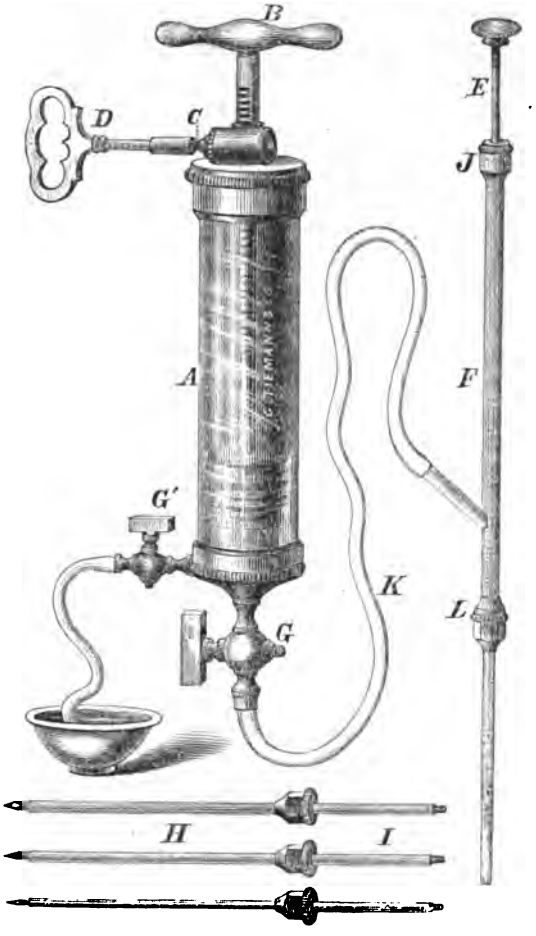
The canulas H are screwed on the tube F at L. By this little arrangement different sized trocars and canulas can be adapted to the same instrument.

The method of using the instrument is as follows: The stop-cocks G and G′ are closed. A suitable trocar and canula are chosen and screwed on the rod E and tube F. The trocar and canula is introduced in the part to be aspirated, and the rod E is withdrawn about 4″ so as to clear the point of the trocar and calibre of the inner end of the canula.

Should the canula become plugged, all that is necessary is to push down the rod E, which drives the trocar through the canula and so removes the obstruction.

If it is wished to make an injection or wash out a cavity, close the stop-cock G, open G′, and fill the cylinder with the fluid and then inject after reversing the order of the stop-cocks.

The whole instrument is neatly packed in a case and perfectly made by Messrs. G. Tiemann & Co. Concerning the importance of the Aspirator it is almost useless to attempt to add to the long list of its brilliant achievements and to what has been so ably written upon the subject by its inventor and master, Dieulafoy; but for the sake of completeness I will state several instances where the above described instrument was proven to be of particular value. I have demonstrated upon several cases in the wards of Bellevue Hospital, in the presence of several of my honored professors and many colleagues, the advantages of the *trocar and canula* over the needle. The needle not only presents a sharp point, endangering the vital organs, especially lungs and heart, but frequently, punch-like, cuts out a plug of tissue which effectually closes the opening, necessitating its removal to cleanse it. With the trocar and canula, however, the puncture is star-shaped, and as the trocar can be withdrawn and concealed, leaving the blunt canula free, no injury to the organs will be possible.



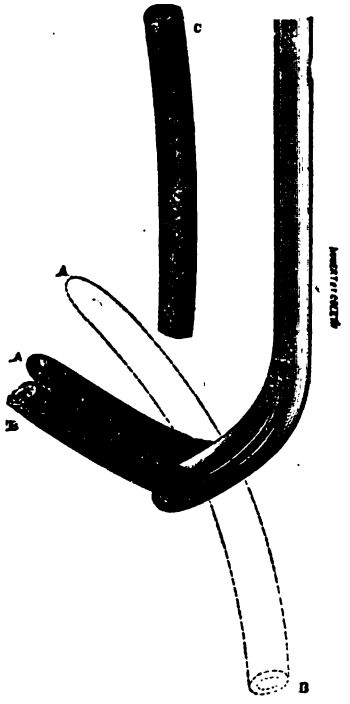
Supposing the canula becomes plugged from any cause, the trocar can be carefully pushed down and the canula *in situ* thoroughly freed from any obstruction. For instance, in a case of "serous pleurisy," the use of another instrument was attempted, but to no

purpose. The patient, in a state of apnœa, was sitting up in bed. Respiration hurried and superficial, pulse scarcely perceptible. After the introduction of a needle into the pleural cavity the fluid, being too tenacious, plugged it, rendering further operations impossible. My instrument was then used, and notwithstanding the canula becoming plugged several times, it was easily cleansed; and without the appearance of any blood or much irritation to the lung, 68 ounces of fluid were withdrawn, which immediately coagulated on exposure to the air. In another similar case the needle scratched and punctured the lung until the fluid withdrawn was tinged with blood, not mentioning the irritation, which produced violent paroxysms of coughing, better imagined than described.

Besides the above-mentioned diseases, this instrument has been successfully used in aspirating collections of fluid in the different cavities of the body, strangulated hernia, etc. It can also be used as an instrument for direct transfusion of blood. Fearing to occupy too much valuable space I simply submit the instrument to the profession, hoping time and experience may prove its utility.

EXTRACTION OF FOREIGN BODIES ACCIDENTALLY INTRODUCED INTO THE BLADDER.

Dr. A. Amussat has published two cases of removal of foreign bodies from the bladder, by means of a small lithotrite with flat blades and rounded edges, such as is employed for calculi in children.



Case 1 was a man, 82 years old, who, in using a gum catheter, broke it off in the urethra; he succeeded in extracting a portion of it himself (Fig. 1, C), but, being unable to extract the remaining portion, he pushed it into the bladder with another catheter.

He then consulted Dr. Amussat, who introduced his lithotrite, and seizing the fragment of catheter near the middle (Fig. 1, A, B), he withdrew it slowly, in order to give the tissues time to dilate, and thus extracted it without difficulty.

Case 2 was a man, 26 years old, who was in the habit of introducing a staff of wood into the urethra for the purpose of masturbation. One evening while indulging in this habit, the staff broke, and the patient came to Dr. Amussat five days afterwards to have it removed.

He was unable to find anything in the urethra, but found a fragment of the staff in the bladder. With his lithotrite he placed it obliquely against the right wall of the bladder; then seizing it by its extremity, as nearly as possible in the direction of its axis, he was enabled to extract it without difficulty, and without pain to the patient.

(Fig. 2 represents the two fragments of the staff. The longer fragment is the one extracted from the bladder. One extremity was surrounded by a sort of calculus, which was firmly adherent; it was by this extremity that it was seized with the lithotrite.)

In neither of these cases did the patient experience any ill effects after the operation.

In the first case, the bladder was large and could not be emptied without a catheter; in the other case, it was irritable, and contracted energetically, expelling all the urine.

It is especially in cases such as the latter that Dr. Amussat insists upon the superiority of the small lithotrite over any other instrument, on account of its small size and its shape, which render it easy of manipulation.—*Gazette des Hôpitaux*, 1871, pp. 497 and 501.

The Archives of Dermatology is to be the title of a new quarterly journal, to be edited by L. Duncan Bulkley, M.D., of this city. The first number will be issued October 1. G. P. Putnam's Sons are to be the publishers. Subscription three dollars per annum.

Correspondence.

CASE OF HYDROPHOBIA.

By FREDERIC D. LENTE, M.D.,

OF COLD SPRING, N. Y.

To the Editor of The Medical Record.

Sir: In the interest of those who are studying the painful subject of hydrophobia, and as a contribution to the statistics of the disease, as well as with the hope that at some future day some useful light may be thrown on its pathology and therapeutics, I ask the publication of the following interesting case, a *genuine* case of hydrophobia. At the time I made the remarks on the subject, at a recent meeting of the Neurological Society, I referred to the history of this case, but as I had mislaid my notes, I omitted the most important particulars.

Was called to the child August 13th, 9 P.M.

M. H., aged 3½ years, with the following account of her case from her parents, who are very intelligent people: Thirteen weeks ago, was teasing a puppy, two months old, and was bitten on the wrist, the slight scar still marking the spot. The puppy had been sick for nearly a week previous to biting her, exhibiting the following symptoms: Commenced moping; could not be attracted by the usual inducements to play; was restless and uneasy; ate and drank as usual at first, and up to his death *partook moderately of both solids and fluids;* was shivering most of the time; was snappish, but not more so than usual, and not disposed to bite unless disturbed; no frothing at the mouth or spasms; died apparently of exhaustion. The father of the child thought there was something peculiar about the sickness of the animal, and says that he felt uneasy about the child from the day she was bitten until the lapse of a couple of weeks. Four other persons were bitten at about the same time by the dog; in three the skin was broken. The father was among them, and shows a very slight scar on his wrist to mark the spot. On Wednesday, August 10th, the mother noticed that the child had a slight cough and that her tongue was lightly coated; but she ate and drank as usual, and exhibited no other symptoms of illness until this morning, when she did not care to get up to be dressed, and seemed dull. She would not eat any breakfast, but did swallow by persuasion a scrap of meat. She called for water; took the vessel containing it, put it rapidly to her lips, got a little down apparently, and then dashed the vessel down. She asked for water several times during the day, but generally pushed away the cup as soon as it approached her lips; once she took a teaspoon filled with water, put it rapidly into her mouth, and swallowed the water as rapidly, and laughed, apparently at her success in surprising her throat. She cried when pressed to take any food. Dr. Murdock, who saw the case a few hours before I did, got her to swallow a teaspoonful of water, but it was with a great effort, and brought on a sort of spasm. When asked if she is thirsty, she answers, yes; but if asked if she wants water or milk, she says no, and appears distressed at the idea of taking it. Since her efforts at swallowing during the afternoon, she evidently fears the water, or the attempt at taking it. She was feverish during a portion of the day, her mother says, but has complained of no distress except at times in the abdomen; if asked where she has pain, she puts her hand on the lower part of the abdomen. She has no fever now; pulse is 128, and regular. Her father says she has been disposed to spit a good deal during the day. She lies quietly for a few minutes, this evening, and then starts suddenly, straightening her arms and legs out at the same time, and looks up with a startled expression, but says nothing. She has shown an evident dislike to company during the day. She is an intelligent child, but always very nervous, although always enjoying good health. Her mother states that she is usually inclined to start suddenly, in the manner above described, if anything is amiss with her. Dr. Murdock directed a laxative enema on seeing her, which has operated, and injections of Elix. McMunn, if necessary to quiet her, also strict avoidance of company. I ordered injections of strong beef-tea (Liebig's Ext.) ʒ ss., g. 2 h., with the anodyne when needed.

August 14th, 10 A. M.—Took three anodyne injections at intervals of two hours, ten, fifteen, and twenty drops of Elix. opii, but they only seemed to excite her, and they were abandoned. She has slept none. Her condition has not very materially changed, except that her lips are pale, especially when she is under excitement. If asked where she has distress, she puts her hand on the top of her head and on the hypogastrium. She cannot be quiet for more than a few minutes at a time, and when she moves, does it quickly and hurriedly; she has expressed a wish for water and asked her mother to drink some, and said that when she got well she would drink it, and wondered why it was bad. She cries and gets excited if asked to eat anything; occasionally a shudder passes over her, and she sighs frequently. She has always been fond of fanning herself, and has taken a fan several times to-day and attempted to use it, but as soon as she feels the air she "catches her breath" and throws the fan away. If any allusion is made to giving her anything, or to using the injection, she springs up in bed with a horrified look and almost in a spasm. Mixed forty drops of McMunn's Elix. in half an ounce of beef-tea, and the mother gave it to her after quite a struggle, but about half of it was passed away. Mixed twenty drops in ʒ ij. of beef-tea, and after reasoning with her, and explaining that it was for her relief, she submitted quite well. At 2 P.M., called to child with the news that she was in "dreadful spasms." Found that she had been rapidly growing worse. The anodyne injection had been repeated three times, thirty drops, then forty, with no effect; pupils widely dilated; has been at times, for a minute or two, talking rationally, and saying that she would drink water when she was well, and that she could not drink because "her throat jumped"—evidently thinking more of water than anything else. She is now frothing at the mouth, looking wild and excited, and throwing herself with great suddenness and violently against the sides of the sofa and wall, notwithstanding the watchfulness of the attendants; once, she rushed from the sofa towards the door, and fell on the floor. There are no convulsions, but only *intense restlessness*, dreadful to contemplate. Her pulse was very frequent and feeble. She had just had an involuntary discharge from her bowels; had passed her urine in the morning; put her under chloroform, and injected morp. gr. ½ hypodermically. She was quiet, her pulse falling to one hundred and sixty and stronger, for twenty minutes; then had a struggle. Repeated the chloroform at intervals, as she required it, until five minutes to three; then gave morp. gr. ⅛ hypoderm. At thirteen minutes past three, a violent struggle, pupils dilated; gave morph. injec. gr. ⅛. In a few minutes another struggle; gave chloroform, and soon after receiving it she ceased to breathe. Her pupils never became more than very moderately contracted,

and there was no positive evidence that the morphine had any considerable influence over the disease. When she was fully under the influence of the chloroform, and breathing stertorously, she would *instantly*, and without the least indication of returning sensibility or pain, spring from the sofa to the floor. It was impossible to maintain quietude except by keeping the chloroform almost constantly to the face.

COLD SPRING, August 20th, 1874.

DIVIDED TENDO ACHILLIS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In No. 206 of THE RECORD Prof. Kearney, of Cincinnati, detailed a case of wound of the tendo-achillis, and seems, in the course of his remarks, to question, by implication at least, the results of a case recorded by Dr. G. H. Mitchell, in No. 202 of the same journal.

This induces me to place on record a case of a similar nature, that occurred in my practice in the year 1861. There is, however, this difference; that the cases reported by Dr. Mitchell and Prof. Kearney both occurred in subjects in or beyond the period of middle life, while the subject of my case was only four years of age.

B—— H——, aged four years—American—male—while running around the yard, where his father was grinding scythes, stepped just over the blade of one that had been sharpened and hung to its snath, and the father fearing the child would step backward and cut himself, immediately caught hold of the snath and jerked it (as he supposed) away from the child's foot, but in his hurry and excitement failed to make any calculation for the circular form of the edge of the instrument, and drew it directly across the right tendo-achillis, incising that tendon clearly and completely through. The child, of course, fell to the ground, and the father, greatly frightened, despatched a messenger for me immediately.

On arriving at the house, half an hour after the injury had been received, I found, upon examination, an incised wound, about one inch above the insertion of the tendo-achillis into the os calcis, one and a half inches long and sufficiently deep to neatly and entirely divide that tendon, together with the long tendon of the plantaris muscle. Very little hemorrhage had occurred, as the foot and leg had been enveloped in a cloth wet in cold water soon after the injury was received; and as none took place upon opening and thoroughly sponging the wound, I proceeded to dress it by bringing the lips of the incision together with an interrupted suture. I then procured a piece of siding long enough to reach from the tuberosity of the tibia to about an inch beyond the ends of the toes—the foot being brought as nearly on a line with the leg as possible without positive pain—and wide enough to take off the greater part of the pressure from the sides of the foot and calf of the leg.

This splint was thoroughly padded with cotton at its points of contact, and *firmly* secured to the foot with a roller bandage. Another roller was now applied to the upper end, commencing at the knee-joint and going downward. The reason for this was a hope that by firmly bandaging the muscle from above downward, I could overcome the retraction that existed, and thus more nearly approximate the ends of the divided tendon, and also prevent any subsequent contractions that might take place. The result fully sustained the opinion, for upon covering the belly of the *gastrocnemius* with the bandage, I found the cut ends of the tendon very nicely in contact. Leaving now a space between the first and second bandages, which included the wound and gave ample opportunity for observation and examination, I took two corks, each about one half an inch in diameter and one inch long, and smoothly rounding off their ends, applied them as lateral splints to the tendon at the point of division, securing them in position with strips of adhesive plaster. Over this I applied a compress saturated with cold water, with directions to renew whenever it became dry, or the wound hot and painful. Three days after the first dressing the sutures were removed, and the edges of the wound held in apposition by adhesive straps. The corks were readjusted so as to support the tendon laterally, and the nurse directed to continue the cold water dressing as before. Directions were also given that the boy should be brought to my office upon detecting much fetor about the wound. One week after the injury, the patient was brought to me, not so much because of any unpleasant symptom as on account of the anxiety of the parents to be assured that all was right. The compress was removed and there was found, instead of any considerable amount of suppuration, the wound nearly healed by first intention; only a few granulating spots being observed, and those at the points of the sutures. The compress was omitted, but the cork splints to the tendon retained, and no further medication made use of. The patient was furnished with a pair of crutches and permitted to go about as usual.

Three weeks after the reception of the wound, all dressings and splints were removed, and, examination revealing the fact that the tendon was completely united, the boy was allowed to lay aside his crutches and make the best use of his foot possible. The result was that after a few days necessary for the restoration of the functions of the extensor muscles, so long kept stretched and inactive, the child was able to walk as well as ever, and from that day to this has never suffered any inconvenience from the injury.

The tendon seemed to unite in a manner not unlike the union between two fragments of fractured bone—by a sort of provisional callus—and to this day there may be felt a hard ring or band around the tendon at the point of injury; yet its function is not, nor ever has been, impeded by it.

I did not at the time, nor do I now, consider the results obtained in this case as anything remarkable, neither do I regard it as necessary that from three months to a year should elapse after such an injury, before good use can be had of the limb; *provided* the cut ends of the tendon are properly approximated and coapted, and *retained in that position*, and the patient's constitution be in a condition favorable for union of any tissues.

I know of no reason why tendons, and especially the tendo-achillis, should not unite nearly as readily as bone, if there can be secured proper coaptation and complete immobility of the parts. Gray, in speaking of tendons (Anatomy, Second American Edition, page 237) says, "Nerves also are not present in the smaller tendons; but the larger ones, as the tendo-achillis, receive nerves which accompany the nutrient vessels."

Here then are the conditions of repair; the tendo-achillis being supplied with nutrient vessels, and nerves, if the surgeon will properly approximate and coapt the divided extremities, and *so* secure them, together with perfect immobility of the parts, nature will repair the injury, without appreciable deformity

in a reasonably short time, or very nearly as quickly as she will repair a fractured bone.

D. A. SHEFFIELD, M.D.

APPLE RIVER, ILL., July 24th, 1874.

POISONOUS ADULTERATION OF FOOD.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I see by your last number that the cases of poisoning in East 32d street have been deprived of any air of mystery that may have hung around them, by the discovery of the true cause in the careless use of Paris green.

But I fear that much of the chow-chow that is put upon the market is hardly a safe article for indiscriminate consumption. In a conversation with a friend connected with one of the largest drug houses in Chicago, he gave me some of his experiences with those who get hold of a drug, and not knowing its name or nature, go to the druggist for information. One of these earnest seekers was a manufacturer of the relishes that the community so frequently buy at the grocers, and so unsuspectingly consume.

It seems that a rival had got hold of an article that had added great piquancy to his chow-chow by reason of the improved twang imparted to it. Fearing to lose his trade by inferiority of production, he had bribed an employee of his rival, and had obtained the drug, which he produced. The secret proved to be aconite root, and a good, strong article at that. The assurances of the druggist as to its poisonous qualities only aroused the incredulity of the enterprising mixer, who was certain that such increased gustatory advantages must be legitimate, and could not possibly be productive of any injurious results, as the improved article had already been some time on the market and no unpleasant surprises had arisen. He probably had his order filled by some less conscientious or inquisitive druggist, and doubtless the compound is on its travels. When I first read in the dailies of the poisoning of a family in New York by chow-chow, I presumed that the cause could be easily explained. If these few words shall serve to guard any one in their selection of this relish, or help to solve any doubts arising from any future case of poisoning by this sophistication, they will have served the object intended.

CHARLES W. OLESON, M.D.

BLOOMINGDALE, ILL., Aug. 20, 1874.

ACCIDENTAL POISONING.

TO THE EDITOR OF THE NEW YORK MEDICAL RECORD.

SIR: Will you kindly accord me a little space in your journal to call attention to one point, which I think concerns not only the public at large, but ourselves as physicians? I refer to the entirely reckless and irresponsible way in which the most active poisons are dispensed by apothecaries to whomever chooses to ask for them, irrespective of the risk and danger attendant upon their use. The moral of my remarks is pointed by the late case of poisoning in 32d street, where, out of four persons who, on Sunday, the 19th July, sat down to dinner, three died within the week, and by the case of the two children who, since that time, died in 11th street from the careless use of poison. In both cases Paris green was the cause of death. In the first of these, the details of which I am thoroughly conversant with, the poison was purchased, without a physician's order, for the purpose of poisoning cockroaches, and so carelessly was it used that it was found scattered in the knife-drawer, about the sink, and upon the dresser. The only wonder is that with such recklessness more fatal accidents do not occur.

To us, as medical men, devolves the duty of calling attention to the danger arising from these poisons, and to urge that measures be adopted preventing apothecaries and others from selling poisons, or, in fact, *any* medicines whatever, without a responsible physician's prescription, and that certain penalties be inflicted upon those who disobey this law. It was only a short time since that a French apothecary was heavily fined for selling calomel without a prescription. Why should his American confrère be permitted to sell virulent poisons to any person who chooses to ask for them? Not only would I hold it penal to sell poisonous drugs without a physician's prescription, but I would restrict the druggist from renewing or copying a prescription without the physician's order to that effect. The reason, upon a moment's reflection, is clear enough for two reasons: in the first place, the prescription is given to the patient at a certain time, for a specific purpose, and in accordance with certain symptoms. Those conditions being fulfilled, and the medicine taken, it is certainly neither within the province of the patient to decide whether the prescription should be continued nor of the apothecary to renew it without orders; and in the second place, many drugs enter into prescriptions which should not be taken except under the guidance of some responsible medical man—certainly not left to the decison of persons entirely ignorant of their properties or action.

If physicians would be more careful to attend to these matters (and upon them rests the blame), we should hear less of such accidents as daily meet our eye in the public prints.

I remain, dear sir,

Very faithfully yours,

FRED. R. STURGIS, M.D.

16 WEST 12D STREET, NEW YORK.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from August 5, 1874, to August 18, 1874.

HEIZMANN, C. L., Assistant Surgeon.—Assigned to duty with expedition under Captain Anson Mills, 3d Cavalry, and, upon return of that command, to rejoin his proper station, Fort McPherson, Nebr. S. O. 111, Dept. of the Platte, Aug. 10, 1874.

LAUDERDALE, J. V., Assistant Surgeon.—Assigned to temporary duty at Fort Leavenworth, Kansas. S. O. 125, Department of the Missouri, Aug. 10, 1874.

WIGGIN, A. W., Assistant Surgeon.—Assigned to duty at Fort Stevens, Oregon. S. O. 98, Department of the Columbia, July 29, 1874.

MCLAREN, A. V., Surgeon.—Died August 1st, 1874, at Boston, Mass.

Medical Items and News.

A CASE OF ACUTE ERGOT POISONING.—Dr. E. R. Henschel writes: "A lady, 240 days pregnant, stepped suddenly from a car; eight hours later she gave birth to a male child weighing 5¼ lbs.

"By a misunderstanding the child received half a teaspoonful (gtts. xxx.) of Squibb's fl. ext. of ergot. Irritation of the fauces failed to excite vomiting. An hour after having taken the ergot, the boy was seized with severe paroxysms of abdominal pains, recurring every fifteen minutes, and lasting hardly sixty seconds. Slight tetanic contractions of the face and extremities were present, and four hours subsequent to the administration of the dose a sharp diarrhœa set in. This, as also the muscular contractions, yielded to repeated hot baths. In twelve hours all urgent symptoms had subsided; for two weeks there was a constant tendency to diarrhœa.

"I mention this case in support of the opinion that it is the uterine contractions the ergot induces, and not the ergot, which causes the death of a child during labor."

DR. D. H. KITCHEN, formerly Assistant Physician of the State Asylum at Utica, has been appointed Chief-of-Staff of the Charity Hospital, New York, *vice* Dr. McDonald, transferred to the City Asylum on Ward's Island.

INTERNATIONAL SANITARY CONFERENCE.—This international, according to *The Lancet* of June 27th, is shortly to take place at Vienna, under the presidency of the Baron von Gugern. The delegates from the different countries are: For France, Dr. Fauvel; Germany, Dr. Pettenkofer and Dr. Hirsch; Russia, Dr. Lunz; Italy, Dr. Luciani; Greece, Dr. Orfanidès; Persia, Dr. Pollack; Belgium, Dr. Heurard; Sweden and Norway, Drs. Kierulf and Berlin. The delegates of Great Britain, and the United States, and the Netherlands have not as yet been appointed. Austria has entrusted the office to Dr. Drasche, and Hungary, to Drs. Sigmund, Gross, and Cattauei.

Two points are principally to be discussed: 1. The quarantine regulations to be adopted according to the progress of science; and 2. The appointment of an international committee whose duty would be to cause epidemics to be studied wherever they may arise by special delegates, and to certify either to the making out of such epidemics, or to their disappearance. The expenses connected with this committee would be borne by the nations who shall take part in the conference.

ENGLISH NAVAL MATTERS.—SIR: The Navy List for June exhibits a deficiency of no less than thirty-seven surgeons! How is it that the first service in the world has become so discredited that, although there are so many vacancies, one man only had the courage to enter in 1874? The causes indeed are not difficult to find. Besides the ever-increasing *désagréments* of a sea life in submerged and dangerous iron-clads, the Navy List itself tells a woful tale. It intimates plainly enough that no step in rank can be gained under thirteen years, and when that is attained, the aspirant must vegetate on half pay for a couple of years or so, or continue to do duty with his new rank in the same subordinate position he has filled for thirteen years already. When he becomes a senior staff surgeon after twenty years' service he will find that he cannot retire as in the army; that he cannot attain the rank of deputy inspector, the list of these being a stagnant pool from which there is no outlet; and that, gray-haired and spectacled, he must continue to brave a sea life among youthful and now uncongenial messmates, his *quondam* companions having long passed into the captains' and admirals' lists, etc., etc., etc.—Letter to *The Lancet* of June 13th.

ARTICLES IN OUR EXCHANGES.

SURGERY.

A new method of transfusion of blood. LANDENBERGER. *Med. Corr.-Blatt*, xliv., 20.

Direct transfusion of blood from the lower animals. ROUSSEL. *Berl. klin. Woch.*, 14, 1874.

Spontaneous fracture of the femur from caries and its subsequent reunion. Pneumothorax in consequence of the penetration into the rectum of a vine-prop. ROSENBERGER. *Ibid.*

Transfusion with lamb's blood. SANDER. *Ibid.*, 15.

Effects of new missiles upon the bodies of animals. KÜSTER. *Ibid.*

Central abscesses in the head of the humerus. MENSEL. *Ibid.*, 18.

On the treatment of varicocele by pressure by means of a truss. RAVOTH. *Ibid.*, 19.

History of synchondrotomy. SINOGOWITZ. *Ibid.*

Arrangements for antolaryngo- and antomyringoscopy. SIEGLE. *Ibid.*, 23.

Neurosis of the joints. MEYER. *Ibid.*, 26.

A case of direct transfusion with lamb's blood. FLEMMING. *Allg. Wien. Med. Cent.-Zeitung*, 55, 1874.

Remarks on cancer of the breast. PODRAZKI. *Allg. Weiner Med. Ztg.*, 20, 21, 22, 23, 1874.

Lithotripsy (continued). IVANCHICH. *Ibid.*, 22.

Treatment of stenosis of the larynx. SCHRÖTTER. *Ibid.*, 26.

Treatment of malignant lympho-sarcoma with arsenic. CZERNY. *Arch. f. klin. Chirurg.*, xvii., 1.

Mechanism of gun-shot wounds (woodcut). WAHL. *Ibid.*

Diagnosis of vascular sarcoma. JAFFÉ. *Ibid.*

A new apparatus for the elbow-joint after resection, etc. (woodcut). BIDDER. *Ibid.*

I. Description of newly-formed joint after resection, etc. II. Modified plan for osteo-plastic lengthening of the tibia in exarticulation of the foot. III. Pathological anatomical observations on the so-called mal perforant du pied, etc. (plate). SCHOEMAKER. *Ibid.*

Studies on the structure of bone and its life in healthy and diseased state. FEHR. *Ibid.*

Fracture of upper wall of orbit. FRONMÜLLER. *Memorabilien*, xix., 4.

Peculiar injury of the external female genitals. *Ibidem.*

Traumatic meningitis cerebro-spinalis. *Ibidem.*

Great hyperæsthesia after concussion of the brain. *Ibidem.*

Death of a person having a hæmatoma of the brain from a blow with the fist. *Ibidem.*

The doctrine of cancer. MEISSNER. *Smith's Jahrbücher*, 1, 1874.

Osteo-plastic resection of nose for removal of naso-pharyngeal polypi. KARPINSKI. *Berl. klin. Woch.*, 17, 1874.

PATHOLOGY AND PRACTICE OF MEDICINE.

Psychical disturbances in the last stages of consumption. BURKART. *Med. Corr.-Blatt.*, xliv., 21, 22, 23.

The respiratory phenomenon of Cheyne-Stokes (conclusion). FILEHNE. *Berl. klin. Wochenschr.*, 14, 1874.

On the treatment of bronchial catarrh by compressed air. SOMMERBRODT. *Ibid.*, 15.

Laryngitis hemorrhagica. BÖCKER. *Ibid.*

Theory of the Cheyne-Stokes respiratory phenomenon. TRAUBE. *Ibid.*, 16-18.

Neurosis of the head. HUPPERT. *Ibid.*, 19-22.

Statistics of croupous pneumonia (concluded). JURASZ. *Ibid.*, 18.

Two cases of malignant pustule. FRANKEL & ORTH. *Ibid.*, 22, 23.

Concussion of the brain and diabetes-melitus in childhood. ROSSBACH. *Ibid.*, 22.

Original Communications.

CICATRICIAL CONTRACTIONS FROM BURNS, INVOLVING THE FACE AND HAND.

By GURDON BUCK, M.D.,

Visiting Surgeon to Presbyterian Hospital, and Consulting Surgeon to Roosevelt and St. Luke's Hospitals, N. Y.

H. C. W., æt. four years and seven months, a resident of New Jersey, of sound constitution and enjoying good health, was extensively burned when sixteen months old by overturning upon himself a kerosene study lamp. At the expiration of about fourteen months the burnt surfaces had mostly healed. The parts involved in the cicatricial contractions which resulted from the burns were the left half of the face and scalp, and the dorsal surface of the left hand and forearm. When I first examined him, in February, 1872, his condition was as follows:—The left half of the scalp, as far back as the occipital region, was bare, and the surface presented a pale, shining, cicatricial aspect; the skin, however, was pliable, and moved freely on the underlying parts. The left ear, though diminished in size by the loss of its rim, retained its natural shape, and was not adherent to the scalp. The skin covering the left half of the forehead and temple, though cicatricial on its surface, was still movable on the subjacent parts. The outer half of the left upper eyelid was everted to an extreme degree, and spread out upon the eyebrow; the inner half of its tarsal border alone came into contact with the lower lid. The conjunction covering the everted portion of the lid being relaxed and swollen, filled up the space between the lids when closed, and thus protected the cornea, which otherwise would have become opaque from constant exposure. The eyelashes, as well as the tarsal edges of both lids, had escaped injury. The eyebrow was denuded of hair. The eyeball itself had sustained no damage, the cornea retaining its natural lustre, and vision being unimpaired. The surface of the left cheek and side of the nose was cicatricial, and the contraction consequent thereupon had drawn the underlid away from contact with the eyeball, but without producing any eversion of its tarsal margin. The left angle of the mouth was somewhat drawn upward by a vertical fold of cicatricial skin upon the cheek immediately above it. In consequence of the condition of the lids of the left eye, patient habitually held his head inclined forward and to the left side, so as to avoid direct exposure to bright light, and had thereby acquired a peculiar expression of countenance (see Fig. 1). A description of the left hand and forearm will be reserved to a subsequent part of the narrative.

On the 6th of February, 1872, an operation was performed in the presence of Dr. James A. Davis, the family physician, from Bloomfield, New Jersey, Drs. John Beekman and Thomas Satterthwaite, and Prof. A. C. Post, M.D.

First Operation.—The object of this operation was to restore the upper lid of the left eye to its normal relations and functions. It was attempted as follows:—Two incisions were started from a single point high up on the forehead, above the middle of the left eyebrow, and continued downward in lines diverging from each other and terminating, one at either canthus of the eye. The inverted V-shaped patch of skin, included between these incisions, was dissected up from the pericranium as low down as the bony margin of the orbit. The upper lid was thus liberated and brought down so as to allow its tarsal margin to be adjusted in contact with that of the underlid. Before proceeding further, a transverse fold of the redundant conjunctiva, lining the upper lid, was excised as far back from its tarsal margin as possible. With the descent of the upper lid, the inverted V-shaped patch of skin, which had been raised from the forehead, was brought down and secured at a lower level by a pin suture inserted on either side, together with additional thread sutures above the pin sutures. The surface left bare on the forehead by the descent of the patch was closed by approximating the opposite edges of the wound and securing them in contact by thread sutures. To relieve these last sutures from tension, parallel incisions were made through the skin on either side, the one over the left temple being three inches, while the other, toward the middle of the forehead, was only one inch in length. The edges of these incisions yawned wide apart, and the desired relief was thus obtained. The bare surfaces left were coated with a collodion crust, formed by applying, first, a

Fig. 1.

layer of dry lint, and then over it a second layer of lint saturated with collodion, which soon stiffens and adheres closely to the surrounding surface. In order to hold the tarsal edges of the lids more exactly in coaptation, a beaded silver-wire clamp suture* was passed in a vertical direction through both lids towards the outer canthus, and out of the way of the cornea, and left in situ for three days. Wet dressings were avoided, and a layer of woven lint of double thickness was kept applied to the parts. Moderate febrile reaction followed the operation, but subsided on the third day. On the fourth day the last sutures were removed. Sloughing, however, had already taken place, and had involved about three-fifths of the trans-

* This suture is constituted as follows: A flexible silver wire, knotted at one end, and strung, first, with a small perforated disk of leather, and then with a smooth, round, glass bead, is armed at the other end with a suitable needle. This is passed through the parts that are to be held in contact, and then a second bead is strung upon the wire. The parts are now supported in contact, while the wire is drawn upon and the second bead pushed on to its place, and secured there by winding the end of the wire two or three times around a friction match, which is then to be cut short with strong scissors.

planted patch. Healthy suppuration succeeded the separation of the sloughs, and the ulcerated surface progressively diminished in size. The collodion crust separated from the forehead on the sixth day, and from the left temple on the tenth, leaving healthy granulating surfaces to heal by cicatrization. The eyeball had in no way suffered from the presence of the silver wire which traversed the lids. Patient rapidly regained his spirits and at the end of one week resumed his accustomed amusements, enjoyed his meals, and rested well at night. The sloughing which had taken place was no doubt to be attributed to the cicatricial condition of the transplanted patch of skin.* The ulcerated surface above the left eyebrow progressively diminished in size, and at the end of the fourth week measured one inch in its transverse diameter, by three-fourths of an inch vertically. If left to itself it was feared that the contraction consequent upon cicatrization might reproduce, to a greater or less degree, the original eversion of the upper lid. To prevent this it was determined to transfer a portion of sound skin from the right half of the forehead and engraft it upon the ulcerated surface. The operation for accomplishing this object was performed on the 8th of March.

Second Operation.—The ulcerated spot itself was prepared by first excising the granulating surface down to the level of the pericranium, with scissors, applied flatwise, and then paring afresh the edges, and everting them slightly. A transverse incision was then carried across the forehead, on a line continuous with the lower margin of the spot just prepared, and as far as the inner extremity of the right eyebrow. The upper edge of this incision was dissected up to afford a bare surface of one finger's breadth, which would be continuous with and form a part of the space above the eyebrow. A pattern, cut from oiled silk, of the size and shape of the space just prepared, was applied upon the right half of the forehead, in a vertical position, with its base resting upon the inner half of the eyebrow, and its free extremity involving the hairy scalp above, which had been previously shaved clean. An incision was then carried around the margin of the pattern, and the included underlying patch of skin was dissected up from the pericranium, but left connected, for support, at the margin of the orbit. The pedicle of the patch, at its inner edge, toward the median line, was adjacent to the bare surface which it was intended to cover. Additional room had to be made for the transfer of the patch, by dissecting up the skin from the forehead, above the nose, and displacing it toward the left side, where it remained attached, and was reserved for subsequent use. The patch was now brought down edgewise from right to left, and adjusted accurately to the edges of the space prepared for it, with sutures inserted close together. In order to utilize the portion of skin displaced from above the nose, for the purpose of covering the surface left bare on the right half of the forehead, it was carried upward from left to right and adjusted to the lower part of the bare surface by means of sutures. The remaining upper portion of the bare surface was coated over with a collodion crust, and left to heal by granulation. Before proceeding to the operation just described, a transverse fold was excised, for the second time, from the still redundant conjunctival lining of the upper lid, and the lids themselves were secured together by a single thread suture inserted through the skin alone, near their tarsal edges, and toward the outer canthus. A strip of woven lint, saturated with collodion, was applied across the outer half of the closed lids, to afford additional support. The entire operation occupied one hour and a half, and was well borne, the loss of blood having been inconsiderable. A layer of woven lint, of double thickness, was spread with cerate, to prevent its sticking to the surface, and laid upon the forehead. Elixir opii, gutt. x., and weak brandy and water were directed. March 10.—*Second day.*—Slight febrile reaction and moderate inflammatory tumefaction. Removed three pins and changed the yarn on the remaining ones. 12th.—*Fourth day.*—All the sutures have been removed in succession, including the one holding the lids in contact. To supply the place of this last suture strips of adhesive plaster were applied. Primary union has taken place at almost all points, and without any sloughing. 20th.—*Twelfth day.*—The collodion crust came off from the forehead, exposing healthy granulations at the circumference of the sore, but in the centre a brownish patch of sloughing pericranium, which had been unintentionally divided in the operation. No exfoliation of bone, however, followed the sloughing of the pericranium; healthy granulations covered the spot, and cicatrization followed. Iron and quinine were ordered as a tonic.

Third Operation.—The patient being in excellent condition, from a stay of three weeks in the country, a third operation was performed on the 20th April, for the purpose of removing a conspicuous distortion of the left angle of the mouth. An incision, commencing at a point on the left cheek, bordering on the middle of the nose, was carried downward and outward across the cheek to a point a little anterior to the angle of the jaw. In its course the incision divided the cicatricial fold which distorted the angle of the mouth, and so allowed the latter to regain its natural shape. The edges of the incision, after having been dissected up, receded from each other and left a space between them of about one finger's breadth. To fill this up with sound skin, the following method was adopted: A patch of skin of the required shape and size was dissected up from the side of the neck below the edge of the jaw, its free extremity being below the symphysis, and its pedicle of attachment adjoining the space to be filled up. This patch was then transferred edgewise to its new locality, and there accurately adjusted by sutures. The wound left on the neck was closed by approximating its opposite edges, and securing them together with sutures. The treatment was the same as after the previous operations. Union failed to take place, and sloughing of about three-fifths of the patch followed. On the fourth day the slough separated, and healthy suppuration succeeded. It was now important to prevent shrinking of what remained of the patch, and to maintain it in place. This was done by adhesive straps carefully adapted and frequently removed. April 25.—A mild attack of erysipelas developed itself upon the left ear and neighboring surface of the scalp, but soon passed off without any serious consequences. From this time his general health improved, and cicatrization of all the sore surfaces progressed steadily till June 8th, when all had finally healed. The result of the last operation, notwithstanding the loss of so large a portion of the transplanted patch of skin, was not without some improvement of the angle of the mouth. As no further operations would be undertaken till the autumn, patient's nurse was instructed to manipulate the parts upon the forehead and left cheek daily, so as to increase their pliability and prevent contraction from taking place. The good effect of

* The experience of this case, as well as of others similarly conditioned, establishes conclusively the rule that a portion of skin which has undergone cicatricial change on its surface from the effects of a burn cannot be used successfully for transplantation, for the reason that when it is detached from its underlying connections its supply of blood from peripheric sources alone is not sufficient to maintain its vitality.

these manipulations was manifest when patient returned in October to spend the winter in the city with his family.

The treatment of the left hand was now to be undertaken. Its distorted condition had resulted from the same burn which disfigured the face, and was as follows:—The surface of the entire forearm and dorsum of the hand was cicatricial. The skin on the dorsum of the forearm was thickened and contracted longitudinally, while in the direction of the circumference it was lax and could be gathered up into folds. The hand and all the fingers were drawn up to an extreme degree in the direction of extension; the thumb and index finger, however, to a much greater degree than the other fingers. To such an extent were they drawn backward that at their metacarpo-phalangeal articulations the articular surfaces no longer confronted each other, but the phalanges rested upon the dorsal surfaces of the ends of their supporting metacarpal bones. The fingers were maintained in their distorted position by separate corded folds of cicatricial skin proceeding from the dorsum of each and converging at the wrist, where they were continuous with and formed a part of a broad fold of skin, which extended up on the forearm toward the elbow. The middle, ring, and little fingers were drawn backward to an equal degree, and remained in contact with each other; while the index finger, being drawn further backward than its fellows, was also widely abducted from the middle finger. The thumb was drawn the furthest backward of all, its first phalanx riding upon the dorsum of its metacarpal bone. The phalanges being all capable of flexion upon each other, the fingers still performed useful service. Flexion and extension at the elbow-joint, as well as pronation and supination of the forearm, remained unimpaired.

Fig. 2.

Preparatory to an operation on the hand, a guttered splint, made of tin, was adapted to the palmar surface of the forearm and lengthened out at the wrist by the addition of a flat piece, bent flatwise in the direction of flexion, and adapted for the support of the hand. On the 24th October, 1872, a fourth operation was performed.

Fourth Operation.—The second, third, and fourth fingers being similarly involved, their treatment only was to be attempted in the present operation, which was executed as follows: By flexing the fingers and putting on the stretch the cicatricial folds on the dorsum of the hand, a broad longitudinal fold of skin was also rendered tense and salient upon the forearm above. This was transfixed at its base, near the middle of the forearm, while gathered up between the thumb and fingers, and a tongue-shaped flap of skin formed by cutting downward toward the wrist and outward through the surface. The detached flap receded toward the elbow, and the three fingers could be flexed to a right angle at their metacarpo-phalangeal articulations; the phalanges themselves, however, could not be flexed upon each other, owing to the resistance of the edges of the wound just made upon the forearm, which became very tense and unyielding whenever flexion was attempted. These edges were therefore freely divided across at selected points till there remained no longer any resistance, and complete flexion of all the phalanges could be effected. No tendons or muscles were exposed; the surface laid bare consisting of adipose and connective tissue. A single vessel only required to be ligated. Here and there a suture was inserted to hold the detached skin in place, but without any attempt to procure adhesion. The limb was then placed upon the splint prepared for it, and the three fingers were secured by adhesive plaster to the flat piece that joined the splint, at an angle of flexion opposite to the wrist-joint. The raw surface, which involved the dorsum of the hand and lower two-thirds of the forearm, was coated with collodion crust. After completing this operation, advantage was taken of the anæsthetic condition of the patient to perform another operation for the further improvement of the lids of the left eye. The outer half of the tarsal edge of the upper lid was still disposed to evert, and this disposition was promoted by the presence of a small mass of granulation growth in the conjunctival cul-de-sac at the outer canthus. The commissure of the lids had also become lengthened in a marked degree, so as to exceed the length of the commissure of the lids of the other eye by about one quarter of an inch. The mass of granulation growth was first excised by seizing it with a fine-clawed forceps and clipping it off at its base with a scissors curved flatwise. The attempt was next made to bring about permanent adhesion between the tarsal edges of the lids at the outer canthus. While the lids were held wide apart and the ball of the eye was protected by a wet rag, a cautery iron, with a ball-shaped end of the size of a pea, heated to redness, was buried in the cul-de-sac of the conjunctival cavity at the outer canthus and applied thoroughly to both tarsal edges of the lids for a distance of nearly two lines from their junction with each other. Compresses wet with ice-water were immediately applied, and afterwards frequently renewed. On coming out from the anæsthesia patient did not appear to suffer from this severe application. No febrile reaction followed. He passed a good night without an anodyne, and the next day sat up with his arm supported in a sling. Scarcely any redness or swelling of the hand or forehead supervened. On the fifth day, Oct. 29, the collodion crust came off from the wrist and forearm, leaving a healthy granulating surface which thereafter was dressed with simple cerate, the limb being kept upon the splint. A moderate degree of inflammation followed the application of the actual cautery to the conjunctiva and tarsus. No injury was sustained by the cornea or ball of the eye. Superficial eschars separated, and healthy suppuration followed. Upon the forearm portions of cicatricial skin which had

been detatched from their underlying connections sloughed. Nov. 5.—The exuberant granulation growth has required the energetic application of solid nitrate of silver at every daily dressing. Forcible flexion of the fingers and wrist has been daily practised: this, though a severe process during its performance, was not followed by any lasting pain afterwards.

It now became apparent that a great advantage would have been gained, by liberating the index finger and restoring it to its normal relations at the same time with the other three fingers; it was accordingly decided to do it without further delay. The operation was performed on the 5th of November.

Fifth Operation.—Two incisions, beginning one at the commissure between the thumb and index finger, the other between the index and middle fingers, were carried through the skin, upward, in converging lines, until they met at a point above the cicatricial fold of skin which held the finger extended. After these had been made, the index finger could be fixed at its metacarpo-phalangeal articulation, but not at its phalangeal articulations. By dissecting up the skin on the dorsum of the first phalanx from its underlying connections, the power of flexing the finger at these articulations was fully restored. The index finger was then brought down by the side of its fellow, where it was secured, and thereafter treated in common with them. The cauterized surfaces at the outer canthus of the left eye being now in a state of healthy suppuration, and all swelling having subsided, the tarsal edges of the lids were secured in exact contact by a silver wire-beaded suture (see page 473) inserted in a vertical direction through both lids, at a distance of half an inch from their tarsal edges, and at the same distance from the outer canthus. Two fine thread sutures were also inserted at the edges, after first scraping them with a dull-edged knife. The thread sutures were removed on the third, and the wire suture on the eighth day. Permanent adhesion was thus secured between the tarsal edges for a distance of nearly three lines from the outer canthus, thus shortening the commissure so as to correspond with that of the other eye. Early in the month of January, 1873, the wound surfaces on the dorsum of the hand and wrist had healed. The manipulation of the wrist and finger-joints had been continued daily with decided benefit, and the limb had been kept constantly secured to the splint. The thumb, not having yet been subjected to any treatment, remained unchanged. To remedy this deformity was the object of the

Sixth Operation.—Feb. 12, 1873. By stretching the thumb in the direction of flexion, a longitudinal fold of cicatricial skin was brought into prominence upon the radial border of the wrist and forearm. At first broad and embracing the root of the thumb, this fold grew narrow as it extended obliquely upward on the palmar surface of the forearm, in the middle of which it became corded, and continued so to the elbow. This fold in the process of its formation had evidently drawn up the thumb into its distorted position, and was still the chief obstacle in the way of its performing complete flexion. This fold was divided, while held on the stretch, by a transverse incision passing one-third around the wrist, and at a distance of one inch above the joint. The tissue creaked under the knife, and the edges of the wound receded wide apart, but without affording much relief to the thumb. The subjacent aponeurotic layer was also found tense and resisting, and had to be divided across. Some degree of flexion was thus obtained. It was now ascertained that the proximal end of the first phalanx was dislocated, and rested on the dorsal surface of the end of its supporting metacarpal bone. In order still further to liberate the thumb, and reduce the dislocation, a longitudinal incision of the skin was carried between the metacarpi of the thumb and index finger upward to join the incision across the wrist, and the skin was dissected up on the dorsal surface of the metacarpus of the thumb. All resistance was at length removed,

FIG. 3.

FIG. 4.

and the thumb could now be brought down and flexed in all its articulations. To the splint that had served hitherto for the treatment of the fingers, an addition was made of a separate digitation for the support of the thumb, which required to be maintained in an abducted as well as a flexed position. The newly made raw surfaces were treated in the same manner as after

the previous operations. Patient did well after this, as he had done after the previous operations. The same process of forcible flexion and stretching was employed upon the thumb as had been used upon the fingers with such good results. In order to reduce the size of the thumb and improve its shape, it was kept tightly wound with strips of adhesive plaster. The commissure between the thumb and index finger was also kept crowded up towards the metacarpus by strips of adhesive plaster applied tightly over a saddle-shaped compress made with several thicknesses of woven lint.

On the 1st of May a spot of the size of a finger-nail, on the wrist, at the root of the thumb, was all that still remained unhealed. Under the constant use of the manipulations already described, and the wearing of the splint, the thumb and fingers had regained their natural shape and freedom of motion, and were gradually recovering their power to grasp objects. The thumb, however, in consequence of its greater degree of distortion, originally had not recovered the power

FIG. 5.

of flexion so perfectly as the other fingers. The face had also much improved; the commissures of the eyelids were alike in length on both sides, and the tarsal edges of both lids of the left eye were perfect in their adjustment to each other. A spot upon the forehead, above the left eyebrow, of the size of a thumb-nail, was covered with a growth of hair that required to be shaved two or three times a week. It was a portion of the hairy scalp, and formed the extremity of the patch of skin which had been transplanted from the right to the left half of the forehead. On the 10th of May he accompanied his family on a visit to Europe. From that time to the present (January, 1874) the daily manipulation of the fingers has been kept up regularly, and the splint has been worn at night only, the hand being left free in the daytime to be exercised in every possible way. The father, in a recent letter, says: "His hand has improved, and he now uses the thumb quite a good deal; in fact for all practical purposes it is about as useful as the other. We still keep it in the splint at night, and continue the manipulations daily on the hand and also on the face."

Figs. 3, 4, 5, showing the results of treatment, are from photographs taken in Florence in January, 1874.

46 West 29th st., May 26th, 1874.

A FEW REMARKS REGARDING CERTAIN ABNORMAL CONDITIONS OF THE SUPERIOR AIR-PASSAGES, AND SOME OF THE CAUSES OF CHRONIC INFLAMMATION OF THESE PARTS.

WITH A FEW SUGGESTIONS CONCERNING THE TREATMENT.

BY W. H. BENNETT, M.D.,

NEW YORK.

1ST. I think it may be demonstrated that dust from ordinary sources, as met with in the air which all of us breathe, and not referring to any particular calling, enter the larynx and trachea in considerable quantities, under certain circumstances, and may remain adherent to the walls of these organs many hours, and even a whole day.

2d. A healthy mucous membrane covering the nares, pharynx, and larynx is less frequently met with in the city of New York than is commonly supposed; certainly in every third adult it will be found diseased at some point, and in children above the age of ten naso-pharyngeal catarrh is exceedingly frequent.

3d. Although the apparent effect of a foul stomach is only visible on the tongue (coated tongue), the irritation is equally felt by the whole mucous surface in the immediate vicinity, and it is frequently impossible to cure a chronic catarrh of these parts without treating the stomach also.

4th. A partial constriction or obstruction of either of the nasal passages, or at the anterior nares, has, to a certain extent, the same effect upon the parts immediately behind it as a stricture of the urethra, or at the external meatus, has upon the parts immediately behind it.

5th. Although it is impossible to make a diagnosis of incipient phthisis solely from the condition of the larynx, we may nevertheless be greatly assisted in our diagnosis by the appearance of this organ.

6th. The chink of the glottis may be so nearly closed, if the narrowing take place gradually, as to present an opening scarcely a line and a half in diameter when stretched to the utmost, and yet sufficient air will find entrance to the lungs to prolong life for the time being, and even for some days.

7th. All diseased membranes absorb moisture from the air in damp weather, but particularly the mucous membrane of the superior air-passages, which may become considerably swelled from this cause, the vessels dilated, the circulation sluggish, and the secretion markedly increased.

To return to my first statement regarding the entrance of dust particles into the larynx and trachea: I have seen several cases where the interior of these organs was discolored in spots, here and there, by a black deposit, and in two of these cases the patient had not been exposed for some hours to an atmosphere of dust. I am confident as to the nature of the deposit, for I took the precaution to wash out the larynx, collect the sputa, and examine it under the microscope. Every one of these several cases suffered from catarrh

of the parts alluded to, and in two of them there was ulceration of the membrane covering the arytenoid muscle. The circumstances which favor the introduction of the suspended matter of the atmosphere into the larynx are a diseased condition of the parts above the pharynx and nares, either a dry condition of these parts, a lack of secretion, or some constriction or obstruction of the nasal passages which forces the patient to breathe through the mouth, and this latter condition is the most favorable. In the first instance, where the person breathes through the nares, he must be exposed to an atmosphere highly charged with dust, and for a long time, before sufficient will collect to demonstrate its presence. I do not think that in a normal condition of the naso-pharyngeal membrane, and when there is no obstruction to free respiration through the nares, dust ever penetrates so far as the larynx or trachea, certainly never in any quantity, unless the atmosphere inhaled is excessively loaded, for the moist membrane, over which the air passes and impinges against at so many points, must certainly filter it of the greater part of its suspended matter. It is only when the larynx itself has been diseased that I have ever found dust in sufficient quantity to prove its presence, even though the parts above were in a favorable condition for its entrance. This, however, I think, is easily explained; for in a healthy condition of the mucous membrane the dust particles would be quickly thrown off and coughed up; while, on the other hand, if there existed ulceration or abrasion or laryngeal catarrh, with scanty viscid secretion, the accumulation of dust would be favored, and it would not so readily be thrown off and expectorated.

Concerning my second statement, relating to the frequency of disease of the superior air-passages, I allude especially to chronic inflammation (so called) of the lining membrane of these parts. Chronic laryngitis is certainly frequent enough, but catarrh of the nares and pharynx is still more common. Why professional singers, stockbrokers, etc., should develop disease of the organ of voice is easily understood; but why at least four or five out of every twelve adults in this city, irrespective of their calling or profession, should suffer from chronic inflammation of some part of the respiratory membrane situated above the trachea is not so apparent, although upon a close study of the matter other important causes may be discovered than the frequent catching of a cold. I do not hesitate to state it as my belief, that the inhalation of a vitiated atmosphere has much to do with the production of the disease in question, and by a vitiated atmosphere I mean one that is overheated or highly charged with impure gases or particles of suspended matter. I allude particularly to this latter condition—the presence of an abundance of suspended matter in the air both in and out of doors. As before mentioned, it may be demonstrated that dust enters the larynx and trachea, consequently the naso-pharyngeal membrane must receive a greater quantity, unless the person breathe through the mouth altogether, which is very rarely the case. The air of all large cities, near the thoroughfares, is loaded with dust of a very filthy nature, which cannot but prove irritating to any delicate surface with which it comes in contact; and although some mucous membranes seemingly stand the contact of dust for a long time without receiving any permanent injury, yet I believe every acute catarrh which these develop is prolonged by this irritant, particularly in the resolving stage, when the secretion gets scanty and the membrane dry. But in those having a delicate cuticle and thin epithelial covering, the constant inhalation of dust particles may cause chronic inflammation without the occurrence of acute attacks. That the inhalation of dust will cause chronic catarrh of the superior air-passages in animals, I have proved to my entire satisfaction, by confining them in an atmosphere loaded with suspended matter for a length of time,* and the air which these animals were forced to breathe contained no more dust than I frequently see in the air in certain parts of the business portions of this city. The out-door air is by no means the only source from whence the dust we inhale comes; but in houses heated by furnaces, as most houses in the city are, the hot air coming from the register is frequently very highly charged with minute particles of matter, and patients affected with catarrh notice themselves the difference between a room heated by hot air and one warmed by other means. Whether furnaces may be so regulated as to carry no dust into the apartments they heat, I do not know; but I am certain that in many instances they generate a great deal of very fine dust, which certainly penetrates farther into the air-tubes than coarser matter; and I think, also, the finer the particles the more harm they do, in proportion to the quantity present and the nature of which they are composed, for they adhere more firmly to the membrane and mix more readily with the secretion. I find that the dust which escapes from the registers, which I have tested several times, has a very faint acid reaction, while the dust taken from out of doors, as found lodged in the doorways and window-sills, is perfectly neutral.

If it be objected to my views regarding the influence of the matter inhaled in causing chronic catarrh, on the ground that conductors on railroad trains, commercial travellers, and others of like callings, who are constantly exposed to an atmosphere of suspended matter, do not sustain any injury to the air-passages, I would state that the dust inhaled by these people is comparatively clean and of a different nature altogether from that which is present in the atmosphere of a large city, or which comes into a room from the furnace; and further, it is a mistake to suppose that the individuals above alluded to do not suffer to a greater or less extent, although some seem to escape entirely. Naso-pharyngeal catarrh is extremely prevalent among conductors on the city horse-cars, and during the spring and early winter months, when the streets are dry and the amount of dust dragged after the cars excessive, they are always made worse. Earth has been extensively used of late as a dressing for foul sores and abraided surfaces, and injections of muddy water are said to be of great service in leucorrhœa and gleet; but no one would think of making a poultice of the scrapings of the streets of New York, nor of washing out the vagina with a solution of the same. The particles of dust suspended in the air, and which we inhale at every breath, are derived both from organic and inorganic matter, and let me ask is it too much to suppose that the organic particles carry the germs of putrefaction and decomposition, and that they induce this process in other organic bodies with which they become mixed, under favorable circumstances, as the retained secretions of the different mucous membranes?

Alluding to a foul stomach as a cause of disease of the superior air-passages, this I know has been recognized before; but I scarcely think sufficient importance has ever been attached to it. We all know that the diagnostic symptom of a deranged stomach is a coated tongue, and this coating of the tongue is nothing

* The writer will take pleasure in giving a full history of these experiments, together with that of some others now under way, at his earliest convenience.

more than cast-off epithelium and an abundant secretion from the mucous glands of the organ, due to the contact of acid irritating gases from the stomach that act equally upon the other mucous membranes with which they come in contact, and, if this condition is constant, give rise to an obstinate form of catarrh, which can never be cured so long as our attention is directed to it alone, and the condition of the stomach ignored. Functional derangement of the stomach, I think, may be the sole cause of a laryngeal or pharyngeal catarrh, and that in persons of temperate habits who neither drink nor smoke at all, and it certainly is a very important factor where other causes are brought to bear. If any proof on this subject were wanted, we would have it in the fact that where the state of the stomach is corrected, the catarrh of the pharynx or larynx, as the case may be, improves, and further, that it frequently happens patients while under treatment for chronic inflammation of the mucous membranes alluded to become dyspeptic, suffer from acid eructations, and vomit after eating, when it almost invariably follows that their catarrh gets worse unless the condition of the stomach is immediately attended to.

Coming to constriction of the nasal passages, there are two reasons why such a condition should favor disease of the mucous membrane behind it: First, owing to the hindrance to the free discharge of the secretions of the part; and second, owing to the rarefaction of the air, which must occur to a greater or less extent on inspiration, which by lessening the normal pressure tends to allow of dilatation of the vessels, cause stasis, and produce exudation upon the free surface of the membrane. These remarks, of course, apply more particularly to the part immediately behind the stricture; but if the narrowing be considerable the pharynx and larynx are affected indirectly in another way, by the patient breathing through the mouth, which, particularly in cold weather, will favor the production of catarrh of these parts. These constrictions occur frequently at or near the anterior nares, and then consist for the most part in a deviation of the septum; obstructions further back are due generally to polypoid growths. In most cases of nasal catarrh there is a more or less swelling of the mucous membrane covering the inferior turbinated bones; but this is due to or is a part of the disease, and not a cause of it; still it has something to do, as already shown, in producing disease of the parts immediately behind it. Deviations of the septum, if looked for, will be found to be exceedingly common, and, in my experience, the septum is generally turned to the right side. They are not all of sufficient extent to give rise to symptoms, and may even be extreme without creating trouble where other causes are not also brought to bear; but if chronic catarrh is once developed, it will be aggravated by this condition, and a cure of the disease will be a difficult matter until the narrowing is dilated or removed.

Dr. J. Solis Cohen, of Philadelphia, in his book on diseases of the throat, mentions, among other causes, the alternate taking of hot and cold food and drink at meals. I attach great weight to this practice as a cause of disease of the parts in question, and instead of placing it at the end of the list of causes, as Dr. Cohen does, I would mention it first. I think, however, that the eating and drinking of hot things, and then rushing immediately into the open air, in cold weather, is more injurious than alternately bringing cold and warm substances in contact with the parts. The taking of solids and fluids very hot, even if not followed by cold draughts or the inspiration of cold air, is to be denounced in the strongest terms.

Another cause of disease of the mucous membranes, recognized by some authors, is the existence of a constitutional disease, which in some may show itself as an eczema or psoriasis, while in others it affects the mucous surfaces. I believe this theory to be correct, for it not infrequently happens that a catarrh develops upon the disappearance of an eczema of the scalp or skin, and as we see chronic eczema of different parts of the derma, persisting for months sometimes, and even for years, in spite of all treatment, there is no reason why the mucous membranes should not be affected in the same way. Supposing the predisposition to exist in a given case, the mucous membrane of the superior air-passages would be more likely to suffer than any other, on account of its exposed position.

I did not propose to enter into all the causes of chronic catarrh of the superior respiratory tract, but simply to mention these several, which I think are important, and merit more attention in the prophylactic treatment of the disease than they have generally received.

In the treatment of chronic inflammation of the air-passages, I would suggest the removal of the patient as far as possible from a vitiated atmosphere, remembering that by this term I also frequently include the air of apartments heated by hot air. This will certainly add to his comfort, if it does not hasten his cure. The state of the stomach should always be inquired into, and a thorough examination for construction or obstruction of the nares made. If any narrowing of these parts is found to exist, it should be relieved at once, before any further treatment is commenced. For the purpose of dilating the nasal passages, I have used the laminaria digitata, and with very good success; but if the membrane covering the inferior turbinated bones is thickened and swelled, incisions should be made through it down to the bone; the application of caustics affords only temporary relief, and if frequently made, does more harm than good, but after the incisions are made, and the hemorrhage stopped, the point of a stick of nitrate of silver, or a bit of sponge dipped in a saturated solution of the same, may be run through them. The hemorrhage after incisions here will be considerable, for the parts are exceedingly vascular. I have known persons to faint during the bleeding, but the sight of the blood might have had something to do with that. Owing to the excessive hemorrhage, only one side should be operated on at the same visit. In the treatment of chronic catarrh we may recognize two principal forms of the disease; in the one, the secretion is scanty and the membrane dry and irritable, in the other, the secretion is more abundant, the membrane flaccid, more or less swollen, and not so sensitive to irritants inhaled with the air, because in a measure protected by the secretion. In most cases of long duration the former condition will be found to exist, and soothing applications, with such as tend to promote secretion, as a mucilage of gum-arabic or flaxseed, containing chlorate of potass, will be proper for awhile, and afterward weak stimulating solutions answer best, but they must be frequently and faithfully used for a long time. If there is hypertrophy, with loss of sensibility, the applications must be stronger. In many of these cases there is an extensive loss of epithelium, and the coating formed by the mucilage protects the part from the air, and whatever irritants it may be charged with. Where there is considerable secretion, astringents are to be used from the first, applied of any strength, according to the peculiarities of the case, as sulphate of copper or zinc, from gr. ¼ to gr. xx. of the former, and from gr. ij. to lx. of the latter, or gr. i. to gr. xx. of the nitrate of silver to the oz. of water. Balsam of co

paiba, ʒi.–ʒij. to the oz. of mucilage, is a favorite remedy with me, given to the patient to use himself several times daily; this is also of great service where the secretion is offensive, or where it is retained and decomposes. Caustics are only required when there is something to be destroyed; for the peculiar, jelly-like, puffy elevations, which not infrequently appear, and which are due to cell proliferation, strong solutions of zinc or copper are superior to the nitrate of silver, but they must be used oftener. For healing catarrhal ulcers quickly there is nothing like the nitrate of silver, but it should only be applied to the ulcerated surface. Before any remedial application is made to a mucous membrane it should be washed off thoroughly with tepid water by means of a syringe, and the manner of making the application is of the utmost importance. I will here call attention to some instruments which I have devised * for carrying the caustic and stronger astringent solutions, by means of which I think the posterior nares, larynx, and trachea may be medicated as thoroughly as the pharynx or fauces.

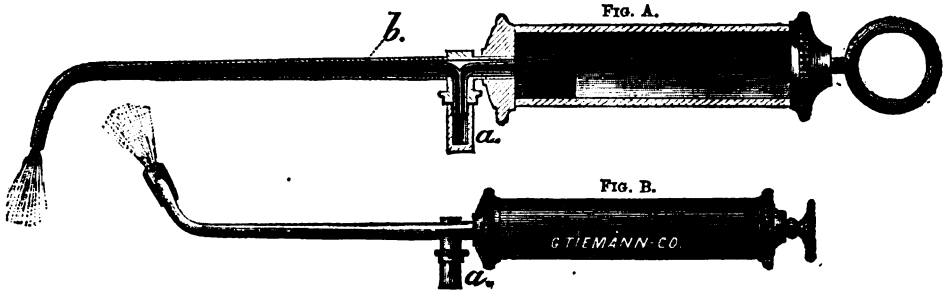


FIG. A.

FIG. B.

FIG. A represents a laryngeal spray-syringe. Fig. B, a posterior nares spray-syringe; *a*, receptacle for the solution used; *b*, tube which conveys the solution. The only difference between the two instruments is that one is smaller than the other, and curved upward instead of downward.

The end of the nozzle of the larger syringe, with the aid of the laryngeal mirror, may be carried over the epiglottis to just above the vocal cords or even between them, and at the moment of inspiration, as the cords are seen to separate, a shower of spray thrown out. The curved extremity of the smaller syringe being introduced behind the soft palate, and the piston driven home, the spray comes in contact with the whole superior pharyngeal surface, and enters the posterior nares; if the patient can be taught to expire forcibly through the nose at the proper moment, the effect is all that can be desired. I think these instruments possess some advantage over others that are in common use, especially for medicating the cavity of the larynx and trachea, for the probang, or brush, is not readily introduced far down, even by skilful hands, and it always causes severe spasm; moreover, it does not touch the whole of the mucous surface, but impinges against the anterior or posterior or lateral wall. With the ordinary spray tubes there is no doubt but that the larynx and trachea may be medicated quite thoroughly, but in doing this all the parts above are sprayed at the same time, and as the solutions used in these cases are strong, the pain and spasm produced is severe—sufficient in many instances, particularly in phthisical patients, to make the exhausted and debilitated sufferer refuse to submit to further treatment. Ulcerations, if above the vocal cords, should always be touched with a sponge or brush wet in a strong solution of nitrate of silver. In the treatment of noso-pharyngeal catarrh the condition of the pharyngeal surface of the soft palate should be looked to, and it will generally be found diseased; the cure of the pharyngitis will be greatly hastened by treating the soft palate also, for at every swallow the two surfaces come in contact. In applying the weaker solutions to the pharynx and nares, Thudicum's nasal douche is an excellent apparatus; but I am afraid of it, for I am sure it frequently does harm to the internal ear, notwithstanding all that has been said to the contrary. Next to the douche, the ordinary syringe will be found the most convenient instrument for applying the weaker solutions to all parts, if it is properly made and of the proper curve. In those cases of pharyngitis where there are enlarged varicose veins, I have frequently cut across them in several places, and seemingly with benefit in some instances. If there are enlarged follicles or thickening of the membrane, the compound tincture of iodine diluted, according to the sensibility of the part, has proved in my hands of more service than any other remedy. I think that many of the ulcerations and abrasions which occur in bad cases of nasal catarrh are due to violent attempts at clearing the passages: the swelled membrane obstructs respiration, and imparts the sensation of accumulated secretion, which the patient tries to force out by frequent energetic attempts at blowing the nose. If true hypertrophy exists, it is incurable; but there are many cases of apparent hypertrophy with thickening, due to infiltration of the submucous tissue, which come under observation and recover entirely. A few suggestions only are here offered, as it is not the object of this paper to consider fully the matter of treatment.

Regarding the aid to be derived from examinations of the larynx in making the diagnosis of phthisis, I would state that as a rule the mucous membrane of that organ is pale red here and there in circumscribed spots, which are raised above the surface and here and there presenting small yellow discolorations, especially on the post surface of the epiglottis. It is true the membrane may be congested and reddened throughout its whole extent, but if in suspected incipient phthisis we find the appearance above described, it is entitled to great weight in confirming our diagnosis. Ulceration of the membrane corresponding to the insertion of the vocal cords on the posterior surface of the larynx is considered by some authors as characteristic of phthisis, but this does not generally occur until we have already recognized the disease of the lung by auscultation and percussion. In laryngitis or

* On the principle of Richardson's Atomizer.

pharyngitis due to a foul stomach, the membrane is more generally congested than in phthisis, and there are apt to be enlarged follicles; at the point where the tongue presses against the pharynx in swallowing there will be a patch or two of a spongy, velvety, or gelatinous appearance, raised above the membrane, and due, as already mentioned, to the proliferation of epithelial cells beneath the surface layer. This condition, however, may occur from other causes. Varicose veins of the pharynx are frequent in those addicted to the use of *spirituous* liquors and condiments, and also in those who habitually take food and drink very hot.

Regarding the extreme constriction of the glottis, which may gradually take place without causing death by suffocation, I allude to it not merely as a curious fact, but to call attention to the truth that the patient's life is in danger from other causes than apnœa when this condition exists, and to urge an attempt *always* at the prompt relief of the obstruction to the respiration. These constrictions of the larynx occur mostly in syphilis and phthisis; they are far more common, however, in the latter-mentioned disease. I feel certain many consumptives die from exhaustion due to the loss of sleep and the over-exertion consequent upon difficult respiration. The dyspnœa is the indirect cause of their death, and it is frequently due to swelling and circumscribed œdema of the glottis, which might in a great many cases be reduced by local treatment. In connection with this subject I may also mention the feasibility of relieving the cough and vomiting which are due to an ulcerated larynx, in phthisis, by local treatment. It is indeed too true that many of these cases go on from bad to worse, in spite of all that can be done for them; but, on the other hand, I am sure I have frequently not only removed the dyspnœa, but also the dysphagia, and to some extent the cough, by local medication and scarification, and by this means prolonged life for many months. I have great faith in local applications in phthisis: not that I expect to cure the disease, or even heal or remove permanently the ulcer and œdema to which my treatment is directed, for they will appear again and again, but I prevent the patient dying from exhaustion by enabling him to take rest and nourishment.

Alluding to the absorption of moisture from the atmosphere by diseased membranes, it need scarcely be explained that this takes place to a greater degree in the mucous membranes of the air-passages than anywhere else, a greater quantity of air coming in contact with these parts owing to the act of respiration; and again it will easily be seen that the nearer the external orifices the diseased part is situated, the greater still will be the amount of moisture presented for absorption, for the deeper the damp air penetrates into the lung the dryer it becomes, being robbed of its moisture as it passes along.*

The influence of the moisture is very manifest in those suffering from naso-pharyngeal and laryngeal catarrh, and to a less degree in persons with chronic bronchitis and phthisis. I think it is important to bear this in mind in the treatment of all catarrhal affections, particularly when we are about to recommend a change of climate. There may be some few cases where the membrane is so dry and irritable that they absolutely require a humid atmosphere, but as a general rule the reverse is the case; and I am sure that persons with the diseases already mentioned suffer more during July and August, when there is a great deal of moisture in the air, than during the coldest weather in winter, when the air is dryer—that is so far as the symptoms relating to the chronic disease is concerned, and not referring to the distress or discomfort produced by acute attacks. If a bad case of laryngitis, for example, be examined on a dry, bracing day, and again on a damp, humid one, after having been exposed to the out-door air for some time, the appearance of the membrane at the two examinations will be very different. In the latter case the membrane will be much more swollen and tumefied, the secretion increased, and the vessels more distended and tortuous, and if there be active cell-formation at certain points, giving rise to jelly-like elevations, or warty-looking vegetations, these will be very prominent, and stick out as spongy, puffy masses of twice the size they appear after inhaling a dry atmosphere. In naso-pharyngeal catarrh the swelling of the membrane covering the turbinated bones is markedly increased on damp days, and the patient will generally tell you that he feels something behind the soft palate which he in vain tries to hawk down and spit out. This is due to the excessive swelling of the epithelial cells from absorption of moisture, a certain degree of prominence of the membrane due to cell proliferation having existed before.

Referring again to treatment, it may be truthfully stated, I think, that too much is as bad, or worse, than none at all; for most applications are in themselves irritants, and do good only by removing or correcting some already existing condition of greater activity or permanence; and it requires as much judgment to know when to stop as what to use, or where to use it.

110 E. 30TH ST.

* The converse statement, however, is true of dry air: the deeper it enters into the air-tubes the more moisture it contains.

Original Lectures.

ACUTE ARTICULAR RHEUMATISM.

REMARKS UPON A CASE,

BY J. M. DA COSTA, M.D.,

Visiting Physician to Pennsylvania Hospital, Philadelphia.

(Phonographically reported for THE MEDICAL RECORD.)

MISS D——, æt. 19 years. This patient has been in the hospital only a few days, and has the appearance of a healthy female. Her father has had rheumatism, but at the present time is in good health. The patient herself has always been healthy until the present attack, which came on about three weeks ago. Upon admission, although presenting the appearance of a strong, healthy girl, she was so crippled with rheumatic swelling of the joints of the feet, and suffered such pain upon moving them, that it was necessary to bring her to the hospital on the most comfortable conveyance that could be obtained. When admitted, her temperature was 103°, respiration 22, and pulse 87. We now find her feet very much swollen and very painful, particularly the right foot and leg. But the trouble is not confined to the lower extremities, for she has swelling of the left shoulder and left elbow-joint.

The patient was at once placed upon the treatment usually adopted in my wards, which consists in the administration of bromide of ammonium in twenty-grain doses every three hours. The painful joints were wrapped in dry cotton, and given perfect rest. The diet was regulated. These are the only points which

need be mentioned in connection with the treatment of the case, except that in all such cases it is customary to administer an occasional laxative, in order to prevent anything like constipation, and further, to promote a healthy performance of the secretory functions of organs immediately connected with the alimentary track. Under this treatment the patient has improved, and to-day, the fourth day since her admission, her temperature is 100°, respiration 20, and pulse 80; and she expresses herself as feeling very much more comfortable than at the time of admission.

There is still considerable pain upon motion, as you can readily perceive when I attempt to move the left shoulder. Some of the smaller joints have also become involved.

Listening to the heart, we find an extremely faint murmur with the first sound; the second sound is normal. The skin is acting moderately well, and there is entire *absence* of those *acid* perspirations which are common in rheumatism.

The urine has a S. G. of 1024, is acid, but not excessively so, and contains no albumen. This completes the record of the case up to the present date.

I will now, gentlemen, direct your attention to some of the facts connected with this case, which are exceptional, or at least worthy of special notice. In the first place, it is to be noticed that this patient has a skin which is not acting in the way in which the skin is supposed to act in a case of acute rheumatism; namely, there is no profuse perspiration, and the perspiration is not highly acid.

In the second place, you will perceive that, associated with this comparative absence of acid perspiration, is a urine which is not excessively acid. These are peculiarities of this case. But, you may ask, do I wish to have the idea entertained that it is wholly exceptional? Do I, in other words, wish to teach that the existence of great acidity of the urine and very acid sweats are a constant phenomena of this disease? I answer, No. At the same time, however, I believe that this entire question of excessive acidity, acid sweats, etc., has been overstated. I feel convinced that there are a large number of cases in which the skin does not yield these excessive acid perspirations, and in which the amount of acid in the urine is not what you might suppose from reading books is to be expected. In other words, the so-called acid theory of rheumatism which assumes that there is an extreme acid condition of the system, and that such acid must be eliminated, fails to satisfy me as applying to all cases, and fails to convince me that it is the real and only solution of the so-called rheumatic diathesis or production of the phenomena of acute articular rheumatism. Again, there is a point of interest in this case connected with the heart.

Here is a patient with a faint endocardial murmur. This is very common, and the more expert you become in physical diagnosis the more constantly you will find such a murmur in cases of acute rheumatism. Even in cases which apparently are not very marked, a slight alteration of the first sound of the heart, a slight prolongation, or assuming a murmurish kind of sound, or even a faint murmur, is of very frequent occurrence. There is, in those cases in which the leading symptoms are not marked, a slight endocardial swelling of exactly the same nature, but in a modified form, of that which takes place in the lining membrane of the joints. This amount of endocardial swelling, however, will disappear under treatment, and pass away with the rheumatic inflammation. It is not sufficient to give rise to the lesions which we perceive when the rheumatic trouble is in itself marked, or associated with marked signs of endocarditis, such as a distinctive murmur, disturbances in respiration, etc., which usually mark endocardial complication. If you choose, it may be regarded as a slight amount of endocarditis, or rheumatic swelling of the endocardium, and this will be present in a vast majority of cases, but is not sufficient to give rise to the typical signs of endocarditis.

Thirdly—with regard to the treatment—this patient has received bromide of ammonium, and no other internal remedy. The case is uncomplicated, therefore simple bromide of ammonium has met all the indications.

The results which I have obtained with bromide of ammonium in the treatment of this affection have been very satisfactory. I have now had the remedy on trial for more than a year, and I have come to favor its use from the fact that it relieves the pain, acts generally upon the skin, keeps up the action of the kidneys, and, as I think, lessens materially the tendency to internal inflammations. I am further pleased with the remedy, for the reason that the cases which I have treated with it have seemed to have a shorter duration than cases treated according to other plans, and quite as short as cases treated according to the ordinary alkaline plan. The advantage which it possesses over the alkaline treatment is that the recoveries are good recoveries; there is no pallor and anæmia, general distress, alteration of blood and tissues, which the long-continued administration of alkalies will cause. For these reasons I am in the habit of using the bromide of ammonium in the treatment of this class of cases. It is sometimes associated with acetate of potash, when internal complications render it desirable to have the influence of a somewhat more active diuretic.

As soon as the acute symptoms have disappeared, the remedy is followed by the administration of quinine in fair doses, which has, as I believe, the power to lessen the tendency to the occurrence of relapses.

EXCISION OF A PORTION OF THE SPLEEN —RECOVERY.

By H. C. MARKHAM, M.D.,

WINTHROP, IA.

The novel character of the following case, surgically and otherwise, may seem to give it a "sensational" tinge: if so the circumstances themselves are responsible, instead of any desire on the part of the writer to give it such an aspect.

At the instance of, and accompanied by the sheriff of the county, I visited an Indian of the Winnebago tribe, who in an altercation with a white desperado had received, as was supposed, fatal injuries. The object of my visit was to enable me to appear in court as a witness against the supposed murderer, more than to attempt any professional assistance. Arriving at the small Indian encampment, we found the object of our visit lying upon the ground in his wigwam, attended by a genuine "Indian doctor." Examination revealed no less than seven incised wounds upon the trunk and extremities; some of these wounds were six inches in length, but none had severed any important vessel. Owing to the peculiar and effective treatment of the "medicine man," these wounds were doing well. Curiosity induced me to observe the method of treating these huge wounds, and so well was it repaid that it may be pardonable to describe it. The native surgeon obliged an aged squaw to carefully lick the sur-

faces of the cuts, after which—using his mouth as a syringe—he injected them with a wash of a dark color, the value of which the fine condition of the wounds well attested. Native skill, however, was baffled by one of the wounds, the principal feature of which induces this report. This wound penetrated the cavity of the abdomen, and was situated immediately over the region of the spleen. Through this wound the desperate struggles of the Indian with his enemy had forced the spleen to the extent of three-fourths its volume, the extreme projecting portion or border, from constriction at the wound and the extreme heat of the season, had already become sphacelated, about thirty-six hours having elapsed since the infliction of the wound. This wound, owing to its grave character, had been left to itself, the "doctor" by grave signs confessing his inability to treat it. To enlarge the wound and return the organ in the condition then existing, was out of the question, to leave it was, in my belief, equally unwarrantable—to remove it presented little better hope other than would arise from the scientific interest involved in the result. This interest impelled me to take charge of this "section" of the case, being satisfied that the other wounds were in safe hands and did not seriously imperil life. After preparing ligatures, with a common bistoury the spleen was removed by making a section nearly on a plane with the surface of the abdomen. In spite of the constriction the hemorrhage was appalling, but with the assistance of my friend, the sheriff, I succeeded in applying ligatures sufficient to arrest it. The pulse was absent, and nothing but an early fatal issue seemed possible. Whiskey was given freely and cold water dressings used, with instructions to continue them. I saw no more of the case at that time, and was surprised some weeks after to learn that the party arrested for the killing had been released. About one year from the date of my medico-legal visit, an Indian came into my office smiling, and, drawing aside his blanket, exhibited the cicatrix of a wound that was at once recognized. His only statement was "Indian heap no run." Accepting the usual theory of physiologists, and in view of the fact that his spleen was then in my possession, his laconic expression required no verification.

Although the entire organ was not removed it cannot be doubted that the portion remaining was wholly useless. The case determines the question as to the vital nature of the organ, and compels the admission that it throws much light upon an interesting physiological problem. A point of minor interest rests in the illustration it furnishes of the remarkable power of resistance to injury in this race, and contrasting with that of the "pale face" whose habits of life are at such divergence with these children of nature.

MODE OF DISCOVERING WHETHER RED WINES ARE ARTIFICIALLY COLORED OR NOT.—M. de Cherville, in one of his clever agricultural articles in *Le Temps*, gives the following useful hints for deciding the above:—"Pour into a glass a small quantity of the liquid which you wish to test, and dissolve a bit of potash in it. If no sediment forms, and if the wine assumes a greenish hue, it has not been artificially colored; if a violet sediment forms, the wine has been colored by elder or mulberries; if the sediment is red, it has been colored with beet-root or Pernambuco wood; if violet-red, with logwood; if yellow, with phytolac berries: if violet-blue, with privet berries, and if pale violet, with sunflower."

Progress of Medical Science.

DYSPEPSIA.—DR. LEVEN (*Lyon Médical*, No. 7, 1874) read recently in the Academy of Medicine a paper on the physiological pathology of the stomach, and particularly concerning dyspepsia. According to Leven the stomach has only the secondary part to play in digestion—it reduces, by means of its movements, and the juices secreted, the volume of the aliments, breaks them up, and facilitates their entry into the intestines; thus, its function is that of the triturating machine.

The injection of nitrogenous substances does not augment the secretion of gastric juice, but produces a great amount of watery fluid due to exosmosis from the capillaries of the mucous membrane. According to this author, dyspepsia is an affection of the stomach characterized by an aqueous secretion, which retards digestion and injures it. The hypersecretion is in some way commenced by the organ to get rid of foreign bodies, over which it has little power and which are expelled in a quantity of fluid. Perhaps in all cases of dyspepsia the predominant symptom is hypersecretion of fluid; and treatment should be directed against this. But the classic remedies, such as quinine, carbon, pepsin, etc., are usually inefficacious. Doubtless these often give relief, but rarely cure. For this reason Dr. Leven has abandoned these and makes use of the following treatment, which in many cases has cured even the most inveterate dyspepsia. He advises his patients to take small doses of neutral salts, or others attacked with difficulty by the stomach, sulphate of soda, phosphate of soda, phosphate of lime, chloride of sodium, or bromide of potassium. He never gives doses larger than from four to eight grains in the day of such remedies, and soon notices an improvement in the symptoms of dyspepsia; the swelling of the stomach diminishes, the secretion is less exaggerated, and the disease is gradually cured. Besides this, a diet easily digested is recommended.

REMOVAL OF A TUMOR FROM THE BLADDER.—Professor Billroth has recently performed another singular and daring operation, which is described by a correspondent to the *Irish Hosp. Gaz.* of July 15, viz., the removal of a tumor from the urinary bladder of a boy twelve years of age. Until ten months before the operation the boy had been very healthy, but began then to complain of pain in passing urine. The pain was not very severe, and was located in the glans penis and the region of the bladder. The urine soon became cloudy, and the desire to void it came so suddenly that the boy would not have time to reach the urinal. The case was supposed to be one of calculus, and was sent to Billroth for an operation. No calculus could be detected; but on examination made after the bowels had been thoroughly emptied, a tumor in the region of the bladder could be distinctly felt through the abdominal walls. It could also be felt by examination per rectum, and was slightly painful on pressure. Its consistence was very much like that of a fibroma, and it seemed to spring from the bladder. Further examination showed that the walls of the bladder were greatly hypertrophied; the sound, however, came in contact with no hard body within the viscera. When the fever following the last examination had abated, the following operation was made. Lateral lithotomy was first performed, with the intention, if the tumor proved to be adherent to the bladder, to make the high operation and remove the growth. When the finger was passed into the

bladder through the opening in the perinæum, a tumor the size of an apple was felt to be growing from the posterior wall, but its pedicle could not be found. The high operation, over the symphysis pubis, was at once performed, some difficulty being experienced in making an opening into the bladder, owing to the danger of opening the peritoneum, in consequence of the contracted state of the organ. The tumor grew with a short and tolerably broad pedicle from the posterior wall of the bladder, and very high up. Notwithstanding an enlargement which was made of the upper wound, the opening still proved too small for the passage of the tumor, and an effort was made to break up the latter with the fingers. At first only small portions of the rather soft tumor were detached, but finally the whole of it was torn from its pedicle, and by compressing its centre it was extracted through the upper wound. The portion of the bladder to which the pedicle was attached was then drawn through the aperture; the pedicle was dissected off, to do which effectually required so deep a dissection as to imperil again the continuity of the peritoneum. Two small arteries were recurved, and the ligatures carried out through the perineal wound. After the operation the patient continued relatively well, having but slight fever. The wounds, at the time of writing, looked remarkably well, notwithstanding their contusion during the operation. Microscopic examination showed the tumor to be a pure myoma.

Rest in Pulmonary Phthisis.—Dr. John McCrea, of the Belfast dispensary, writes to *The Lancet*, of July 18, saying that recent writings relative to the necessity for carefully selecting the cases to be treated by this method according to the amount of lung involved, is likely to prevent as general a use of the measure as its importance and safety would warrant. In a large number of cases at the above dispensary he has found nothing equal to it in efficiency and general applicability. Indeed, he knows of no stage of the disease in which it has done harm, and in nearly all cases the patients have desired a reapplication. His method differs somewhat from the one recommended by Drs. Berkart and Dolbill, and, in brief, is as follows:—For application to the upper part of the chest emplastrum rotrans spread upon swan's-down and cut into strips three-quarters of an inch wide and extending across the cloth. The first strip runs up the back in the space between the spine and the scapula on the affected side, and being drawn tight and applied slowly and carefully, is carried over the shoulder and down the front of the chest. The second strip, which is applied horizontally, commences at the spine, crosses the first strip, passes under the axilla and on towards the sternum; forcible expiration being maintained by the patient during the attachment of both strips. Other strips are to be applied in a similar manner until a sufficiently firm grasp is had of the chest, when the large rectangular strip of plaster is applied to the scapular interspace, extending down to the last dorsal spine, and another squarish piece to the front between the clavicles and mammæ, serving to keep the ends from curling up. The whole is then well rubbed over to ensure its adhesion. This dressing will ordinarily require changing only once a fortnight.

Cure of In-growing Toe-Nail.—Dr. Ozanam (*L'Abeille Méd.*, July 6) regards the surgical operation at present commonly resorted to for the relief of this affection as needlessly cruel. The tearing out of the nail, or portions of it, leaves the toe in a tender condition for a long time, sometimes permanently. The plan which Dr. O. suggests as a substitute is as follows. A nick is made in the centre of the edge of the nail, extending in to its attachment. Then the upper surface of the nail is scraped along the middle line until it is thinned nearly down to the quick. A small piece of sheet-rubber is afterwards inserted on either side of the nail with the aid of a spatula, so as to form a sort of gutter around the edge, and to separate it from the adjoining flesh.

Dr. O. lays great stress upon this part of the treatment, and in particular upon the employment of rubber. Lead, he remarks, is too hard, charpie too soft and yielding, while the elasticity of the rubber on the one hand, and its comparative softness on the other, serve to keep up a constant but gentle pressure on the inflamed tissues without giving undue pain. Thus, with the elastic pressing up the outer edges of the nail and the thinness of its centre allowing a certain amount of yielding, it gradually becomes flatter, and its edges cease pressing upon the adjoining flesh. Should fungous granulations exist about the ingrowing edges of the nail, it will be proper to apply some alterant, and the best for this purpose is powdered nitrate of lead, which reduces the fungosities and rapidly arrests suppuration. After the condition of the nail is once remedied, it is necessary to keep the central portion scraped thin for some months, until it becomes flatter and assumes a more normal form.

Audible and Inaudible Sounds.—The phenomenon of color-blindness is a familiar fact; but an analogous phenomenon, what might be called pitch-deafness, though not uncommon, is not so generally known. By *pitch-deafness* is meant insensibility to certain sound-vibrations. Prof. Donaldson, of the University of Edinburgh, used to illustrate the different grades of sensibility to sound by a very simple experiment, namely, by sounding a set of small organ-pipes of great acuteness of tone. The gravest note would be sounded first, and this would be heard by the entire class. Soon some one would remark, "There, 'tis silent," whereas all the rest, perhaps, would distinctly hear the shrill piping continued. As the tone rose, one after another of the students would lose sensation of the acute sounds, until, finally they became inaudible to all.

There is reason for supposing that persons whose ear is sensible to very acute sounds are least able to hear very grave notes, and *vice versâ*. Probably the hearing capacity of the human ear ranges over no more than 12 octaves. The gravest note audible to the human ear is supposed to represent about 15 vibrations per second, and the sharpest 48,000 per second.

The auditory range of animals is doubtless very different from that of man; they hear sounds which are insensible to us, and *vice versa*. Many persons are insensible to the scream of the bat—it is too acute. But to the bat itself that sound must be in all cases perfectly sensible. If, then, we suppose the bat to have an auditory range of 12 octaves, and its scream or cry to stand midway in that range, the animal would hear tones some six octaves higher than those audible to the human ear—two and a half million vibrations per second.

Scoresby and other Arctic voyagers and whale-hunters have observed that whales have some means of communicating with one another at great distances. It is probable that the animals bellow in a tone too grave for the human ear, but quite within the range of the cetacean ear.—*Pop. Science Monthly.*

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, September 15, 1874.

THE RIGHTS OF INDEPENDENT CRITICISM AND THE SUIT FOR LIBEL AGAINST THE MEDICAL RECORD.

THE attention of the readers of THE MEDICAL RECORD is called to the appeal of Dr. W. A. Hammond, which we have extracted from the last number of the *Psychological and Medico-Legal Journal*, Sept. 1, 1874, and which follows this editorial. The matters under discussion refer so directly to the editor of this journal, and so imperatively demand a personal explanation, that I am compelled to waive my usual custom and address my readers in the first person. I do not shrink from such responsibility, for as editor of THE RECORD, and as a member of the medical profession, I am always willing to have all my public or private professional acts criticised by my peers, and always ready to stand before the bar of professional opinion and give an account of myself.

It will be remembered that in the issue of the MEDICAL RECORD for August 1 there appeared an editorial on hydrophobia, in which Dr. Hammond received a share of criticism. Shortly after the publication of the editorial Dr. Hammond came to the office of THE RECORD and complained that he had not received justice at my hands. After a conversation with Mr. Wood, the publisher, and at his suggestion, Dr. Hammond addressed me by note, stating his grievances, and thus began a correspondence which is published in full in Dr. Hammond's Journal, and which I reproduce.

As far as my letters to him are concerned, and the circumstances attending them, the truth is told by Dr. Hammond, and personally I am under obligations to him, not only for his statement of facts, but for the presentation of his side of the argument, which presentation I have been anxious that he should make from the beginning. It will be seen from Dr. Hammond's own showing that I took the usual course to do him justice, and that in my letter from Barrytown I gave my reasons for so doing. In my reply to his first letter I maintained that "all the statements made in the said article were based upon what I believed to be facts," and if he convinced me that I was in the wrong "no one would be more willing to acknowledge it." There was no other way, in my opinion, to give him entire satisfaction than to open the columns of THE RECORD for any reply he might choose to make. By this means he could come before the same audience as myself and have every opportunity to present his side of the argument. The advantage of this proposition was, that in case he could not convince me that my facts were without foundation, which I imagined was quite likely, he could, nevertheless, take the additional chance of a verdict in his favor from the professional public. The mere examination of his specimens by me would not affect the question one iota, as nothing had been said tending to prove that he did not see what he described. The criticism as to microscopical appearances was upon his conclusions only, and as such it must stand upon its merits. I fail to see by what train of argument Dr. Hammond justifies himself in stating that I impugn his good faith, that I intimate that he made no microscopical examination at all, or that I make it appear that I believe he "wilfully and falsely" described appearances which did not exist. The only way to explain such conclusions on his part is to allow the possibility at times of imagination getting the better of reason even in the best regulated minds. That I do charge him with unethical conduct is true, and this charge is principally based upon the manner in which he allowed himself, as a professional man, to be paraded before the public in the columns of the New York *Tribune*.

After having written to Dr. Hammond explaining my reasons for inviting him to reply through the columns of THE RECORD, I expected an answer giving his reasons for objecting to such a course. This I thought would be a matter of civility on his part. No such answer came, however, and consequently my correspondence with him ceased. Next came his letter to Mr. Wood, which in my opinion—(Dr. H. concedes the right I have to an opinion)—was threatening in its tone; then followed the admirable answer from Mr. Wood; and last of all, a suit for libel was commenced against THE RECORD.

Although this resort to law could not alter the position I had taken, I nevertheless regretted Dr. Hammond's course, on account of my friend Mr. Wood, who had so nobly stood by me during the whole misunderstanding. I then concluded, in order to set myself right in the matter before the profession, to publish the whole correspondence, and then volun-

teer such a statement as would answer the possible charge that the editorial was not founded on facts. To this end I wrote to Drs. C. P. Russel and Arnold, and called upon Dr. Knox, who had performed the autopsy in the Entwistle case. After I received answers to these letters, and was ready to proceed with my statement, Dr. Hammond's journal appeared, anticipating me in my publication. I merely mention this latter circumstance to explain why no reference was made in these letters to Dr. Hammond's charges.

That portion of the editorial particularly obnoxious to Dr. Hammond is the following: "It was scarcely fair in Dr. H. to appropriate all of interest in the McCormick brain, as we understand he had likewise done at the Entwistle post-mortem, before the arrival of the curator of Bellevue made it necessary for him to deliver up two or three thin slices. In the latter case, Dr. H. discovered no extraordinary lesions."

He claims that these assertions are not founded on fact. I beg leave to differ with him on that point. At the same time I do this, I admit the truth of the statements contained in the letters which he publishes from Drs. Hadden and Arnold.

I shall take the portion of editorial alluded to as a text for a few remarks bearing upon the questions at issue. I shall try to be particular in establishing my premises. The celebrated philologist, Geo. Crabb, thus defines the verb "to appropriate": "It is to take to one's self either with or without right. It is a matter of convenience. It springs from a selfish concern for ourselves, and a total unconcern for others." I accept this definition of Mr. Crabb, and propose to justify its use in accordance with the facts which I shall present.

Next in logical order I submit some correspondence the most of which antedated the September number of the *Journal of Psychology*.

I wrote the following letter to my friend Dr. Russel:

"OFFICE OF THE MEDICAL RECORD, N. Y., *Sept.* 7, 1874.

"DEAR DOCTOR:—You will recollect that in a conversation with you some time since concerning the cases of McCormick and Entwistle, you related to me certain circumstances of which you were an eye-witness. The statement made in THE MEDICAL RECORD of August 1st relating to the post-mortems of the said McCormick and Entwistle in regard to the disposition of the specimens, etc., were based upon your observation. Dr. Hammond objects to the editorial, and maintains that it was not based upon facts. I have written to him two or more letters denying his assertions, assuring him, however, that I was willing to be corrected, and tendering him the columns of THE RECORD for any reply he chose to make. He has persistently refused this offer, and in the end has sued THE RECORD for libel. Now, in order to set myself right before the profession, I propose to publish the whole correspondence. The question of fact which must be settled has special reference to his action at the post-mortems in question. Please answer me as soon as possible, that I may be able to prepare what is necessary to be said for the forthcoming number of THE RECORD.

"Sincerely your friend,
"GEO. F. SHRADY.

"DR. CHAS. P. RUSSEL."

To this I received the following reply:

"NEW YORK, 54 W. NINTH ST.,
"*September 8th*, 1874.

"DEAR DOCTOR:—In answer to your note requesting me to state, in writing, whether facts within my knowledge, previously given in conversation to you, warrant the particular language which you employed in your editorial of August 1st, to wit: 'It was scarcely fair in Dr. Hammond to appropriate,' etc., I will state the circumstance which came under my observation, as I was present, by invitation, on both occasions.

"The McCormick autopsy was made principally by the deputy coroner, Dr. Leo, who removed the brain, with its appendages intact, as far as possible, and placed them in Dr. Hammond's hands. The latter gentleman, with a knife, cut off the pons varolii, medulla oblongata, and a small segment of the upper cord, and placed them in bottles which he had provided. No one, within my hearing, was offered the slightest piece of these sections. Large slices of brain-substance were certainly 'lying around loose' in sufficient quantities to have supplied each person liberally; there was no objection to any one's helping himself, and I presume some did so.

"The subsequent one upon Entwistle was somewhat different in its character. Dr. Hammond appeared at Bellevue a few hours after Entwistle's death; and notwithstanding he was informed that the coroner expected to officiate at the post-mortem, he persuaded Dr. Knox to make it two hours in advance of the coroner's arrival. Dr. Hammond was unconnected with the hospital, yet he assumed charge of the autopsy, and directed how it was to be done. He himself cut off the similar portions to those dissected by him from McCormick's brain, bottled them up in flasks brought by him for the purpose, and put them in his pocket.

"The post-mortem having been virtually concluded, Dr. Hammond was about leaving, when he unexpectedly met Dr. Arnold near the door, to whom he offered the specimens in his possession. But that he had 'appropriated' the specimens mentioned, *i.e.*, had secured them entire, in order to use them for his own personal examination, was sufficiently palpable to me. Having myself been, some sixteen years since, house-surgeon of Bellevue Hospital, and being not unfamiliar with its rules, I was the more surprised that a gentleman unconnected with the institution should have been permitted to exercise therein what appeared to be self-constituted authority.

"Yours very truly,
"CHAS. P. RUSSELL.

"DR. GEO. F. SHRADY."

Desiring to follow out my chain of facts still further, I wrote to Dr. Arnold as follows:

"NEW YORK, *September 8th*, 1874.

"DEAR DR:—I beg leave to call your attention to some statements made in an editorial of THE MEDICAL RECORD, August 1st, in reference to the post-mortem examination in the Entwistle case. I believe those statements to be founded on facts. If they are not, I shall be happy to be so informed. You can aid me very much in arriving at the truth, by answering the following questions:

"Is it customary or proper for any gentleman unconnected with Bellevue Hospital, and not a coroner, to take any active part in post-mortem examinations held in that institution? Did you invite Dr. Hammond, directly or indirectly, to make any examination of the body of Entwistle? In the absence of the coroner was it not proper for any one who desired to make any such examination to ask your permission so to do?

"Did Dr. Hammond have the medulla oblongata or any other portion of Entwistle's body in his possession, and in a bottle, before you arrived?

"The only reasons for asking you questions in this manner is to avoid the writing of a lengthy letter. I will ask of you as a special personal favor to answer the questions at your earliest convenience.

"Sincerely yours,
"GEO. F. SHRADY.

"DR. J. W. S. ARNOLD."

The following was Dr. Arnold's reply:

"NEW YORK, *September 10th*, 1874.

"DR. GEO. F. SHRADY.

"MY DEAR SIR:—Your letter of the 8th inst. is at hand, and with reference to your questions I would state:

"It is not customary for any gentleman not connected with the Bellevue Hospital, and not a coroner, to take any active part in post-mortems held in said institution.

"I did not invite Dr. Hammond to make any examination of the body of Entwistle, either directly or indirectly.

"In the absence of the coroner, it was proper to ask the permission of the attending curator to make such examination.

"Dr. Hammond, immediately upon arrival, handed me a bottle containing the medulla oblongata of Entwistle. "Very sincerely yours,
"J. W. S. ARNOLD."

After the appearance of the *Psychological and Medico-Legal Journal* for September, not having sufficient time to write to and receive an answer from the coroner in charge of the Entwistle case, I called on that gentleman, and obtained from him the following:

"NEW YORK, *Sept.* 10, 1874.

"I hereby certify that I at no time gave authority to Dr. William A. Hammond to hold a post-mortem in the Entwistle case, nor to any one else, but found on my arrival at the Morgue that the post-mortem had already been held. I further certify that the post-mortem in this case was held without any authority from my Deputy, Doctor Wm. Shine.

"HENRY WOLTMAN,
"*Coroner*."

Next in my line of argument, I quote from Dr. Hammond's letter to Dr. Arnold: "The facts as I understand them are, that you were absent when the post-mortem was begun; that it was said you would not be present; that Dr. Knox, who made the post-mortem, authorized me to take the medulla oblongata, etc."

Next comes the following item of correspondence which took place after the appearance of Dr. Hammond's journal:

"NEW YORK, *Sept.* 10, 1874.

"DR. A. W. KNOX.

"MY DEAR SIR: Wishing to learn all the facts bearing upon circumstances attending the post-mortem of Entwistle, I take the liberty of asking you the following question: Did you authorize Dr. Hammond to take the medulla oblongata from the said Entwistle's body, or did you in any way give him authority to conduct any part of the autopsical examination? "Very truly yours,
"GEO. F. SHRADY.

"DR. KNOX, Bellevue Hospital, N. Y."

Dr. Knox wrote me the following reply:

"BELLEVUE HOSPITAL, *Sept.* 11*th*, 1874.

"DR. GEO. F. SHRADY.

"DEAR SIR:—In reply to your note of the 10th inst., I would state that I not only did not 'authorize' Dr. Hammond (by any word or act, so far as I am aware) to take the medulla oblongata from Entwistle's body, or to conduct the autopsical examination, but further, that I had no *power* to 'authorize' him or any one else in the matter. "Very truly yours,
"A. W. KNOX."

Asking my readers to bear in mind the definition of the verb "appropriate," I am ready to draw the conclusions.

I admit that Dr. Hammond had a right to conduct the autopsy of McCormick, and I have never denied it; neither have I denied that he had a right to the specimens, but I claim that "it was scarcely fair to *appropriate all of interest* in McCormick's brain." I mean to be understood as saying that Dr. H., as a matter of professional courtesy, should have offered some portions of the medulla or pons varolii to some of the medical gentlemen present—and especially to such as he knew were interested in the study of nervous diseases. This it appears he did not do, according to Dr. Russel's statement. The pieces of brain "lying around loose," were in my opinion of no special pathological interest in connection with the case.

In regard to the Entwistle post-mortem, I think I have substantiated my assertions so far as the matter of appropriation is concerned. I believe I have proved that Dr. Hammond conducted his portion of the post-mortem without any authority whatsoever, and that he did so in the belief that the curator would not be present. Still bearing in mind the definition of the verb "appropriate," I ask what is the conviction which forces itself upon any one's mind acquainted with the facts of the case? If Dr. H. knew or believed Dr. Arnold would not be present, how can I explain the fact that he came prepared to take specimens from the dead-house—specimens which unquestionably belonged to the hospital? Here I must again refer to the definition of the verb "appropriate." Again, if it was *not* "necessary for him (Dr. H.) to deliver up" these specimens on the arrival of the curator, why did he (Dr. H.) do so?

I do not wish to misinterpret Dr. Hammond's motives in this matter, and am free to say that, in his enthusiasm over the case, he forgot, for a time at least, the extent of his privileges as a visitor, and the usual professional courtesies which obtain on such occasions. Such actions, in my opinion, render him liable to criticism; and in my function as medical journalist, I claim, in the name of the profession, the right—recog-

nized throughout the civilized world, wherever the independence of the press is fostered—to express an opinion. Dr. Hammond does not deny me this right, provided I have the facts upon which to base such an opinion. I have now presented him with these, and I hope he is satisfied.

Having said thus much, in justice to him and to myself, I frankly acknowledge that the facts of the case will not bear me out in the literal interpretation of the statement that he delivered up only "two or three thin slices;" I take pleasure in saying that he delivered up *all* the Entwistle specimens in his possession, and that Dr. Arnold has the medulla in question in his keeping as curator.

The statement, "in the latter case, Dr. H. discovered no extraordinary lesions," is, I believe, true. If Dr. Hammond has found any extraordinary lesions I have yet to hear of them.

I am exceedingly sorry that Dr. Hammond should have seen fit to sue THE RECORD for libel under the circumstances, but if the case comes into court I shall hope for a vindication of the rights of independent criticism. That the editorial is "evidently dictated," as Dr. Hammond expresses it, "by 'envy, hatred and malice, and all uncharitableness,'" I emphatically deny. I have no ill-feeling whatever towards him, for personally we are entire strangers to each other; neither have we ever had any misunderstanding during our official intercourse while I was a member of the medical staff of the army and he Surgeon-General. Convinced that Dr. Hammond deserved to be criticised in the matter, I acted accordingly. From this point of view, I do not regret my action, and shall deem it my duty to repeat it whenever Dr. Hammond, or any other gentleman, gives me occasion, at the same time taking the usual care that my statements are "based on facts." I have presented these facts, and am glad that Dr. H. has given me an opportunity so to do, and not treated me as he has done my friend "the *Ishmaelite* of the *Philadelphia Medical Times*," whose editorial he dismisses with the argument, "in mercy I stay my pen."

His charge that I offered my services to the New York *Tribune*, to give an account of the meeting of the American Medical Association, is perfectly true. I did this solely in the interest of the profession, that it might be fairly represented to the world, and without any other expectation of reward than a consciousness of performing what I considered a privileged duty. My offer was gladly accepted, and I would have fulfilled my promise if I had not been afterwards informed that by some mistake different arrangements had been made previous to my calling. I am as much surprised at Dr. Hammond for bringing up this matter as part of his argument, as I am at the violation of the ordinary courtesies of journalism on the part of the *Tribune* in furnishing him with the information.

GEO. F. SHRADY.

AN APPEAL TO THE MEDICAL PROFESSION.

BY WILLIAM A. HAMMOND, M.D.

(From the Psychological and Medico-Legal Journal, New York, September 1, 1874.)

THE MEDICAL RECORD, of this city, issued on the 1st of August last, contained an editorial article on hydrophobia, which appeared to have been written for the express purpose of disparaging me in the estimation of my professional brethren and of the public. It was an unprovoked attack, and, as the following correspondence, and the preceding article in the present number of this journal, quoted from the *New York Medical Journal*, show, was not based on facts.

Since my residence in New York (now ten years), I have studiously endeavored to avoid disagreements and controversies of all kinds, and if I have not been altogether successful in this direction, I have at least been able to abstain from troubling the profession, and the public generally, with my private quarrels. I suppose every man who attains to any degree of eminence in the medical or any other profession has his enemies. I am quite sure I have as few as any of my colleagues.

But the attack of THE RECORD was so public, and so entirely without proper cause, that I was bound, in justice to myself and the many eminent medical friends who knew the truth in the matter at issue, to call the responsible perpetrators to an account. In the article on the Scientific Results of the post-mortem examination instituted on the remains of McCormick, I have replied at length to the gratuitous attack of a coroner's jury; in the present communication I shall not have much to say in addition to submitting the correspondence.

Immediately on reading the editorial in THE RECORD, I wrote the following letter to Mr. Wood, the publisher:

"43 WEST 54TH STREET,
"NEW YORK, *Aug.* 1*st*, 1874.

"MY DEAR MR. WOOD:—The last number of THE MEDICAL RECORD contains an editorial article on hydrophobia, which is so eminently unjust to me, and is so evidently dictated by 'envy, hatred and malice, and all uncharitableness,' that I am constrained to request you to give it your attention, and to disavow what I am quite sure you did not see before publication.

"For any difference of opinion with me, I have no complaint to make. The writer is, of course, as fully entitled to his own views as I am to mine; but in this article he has gone beyond the pale of decency, and has descended to scurrilous and libellous language, altogether unbecoming a respectable and scientific journal, such as I have always understood THE RECORD to be.

"He impugns my good faith, questions my ability to make histological examinations, and accuses me of improper and unethical conduct. He even intimates that I made no microscopical examinations at all, or that I wilfully and falsely described appearances which did not exist. He also perverts the meaning of the coroner's verdict.

"Now, as I have said, I am very willing that the writer shall differ with me as much and as often as he pleases; but I cannot consent to allow such assertions as I have specified to pass unnoticed, and I therefore respectfully request that you will direct a proper re-

traction and disavowal to be made in the next number of THE MEDICAL RECORD.

"Yours sincerely,

"WILLIAM A. HAMMOND.

"WILLIAM WOOD, Esq., 27 Great Jones Street."

In order to save time, I took this letter in person to Mr. Wood. He read it in my presence, and informed me that he had nothing whatever to do with the editing of THE RECORD; that by the terms of his contract with Dr. Shrady, the latter had absolute control of the journal so far as the matter for publication was concerned, and asked me to write to Dr. Shrady, on the subject of my communication, as he was sure Dr. S. would be very glad to rectify erroneous statements, and acknowledge any injustice he might have committed. Yielding to his representations, I wrote the following letter to Dr. Shrady:

"NEW YORK, *Aug.* 3*d*, 1874.

"DEAR SIR:—I have written to Mr. Wood, calling his attention to the article on hydrophobia in the last issue of THE RECORD. I now write to you with the same object.

"Either you believe it to be true in its allegations direct and indirect, or you do not believe it. In the former case it is, I conceive, your duty to take the means which I now offer you of correcting your views; if, on the contrary, you do not believe it, you ought to disavow it at once.

"I have confidence enough in your sense of justice to believe that you will do what is right in the matter.

"Yours sincerely,

"WILLIAM A. HAMMOND.

"DR. GEO. F. SHRADY."

I sent this note to Mr. Wood's place of business, as he had informed me that Dr. Shrady would be in town on the 5th, and that it would be handed to him on his arrival. It seems, however, that Mr. Wood was mistaken, for Dr. S. did not, as appears from the following communication to me, arrive in the city till the 11th:

"NEW YORK, *Aug.* 11, 1874.

"DEAR DOCTOR:—Yours of the 3d inst. has just been received. My absence from town until the present has prevented an earlier reply.

"I have carefully reconsidered the article to which you call my attention, and while I am sorry that anything has been written to cause you any annoyance, I am compelled to say, in justice to myself, that all the statements made in the said article were based upon what I believed to be facts. As I have not been able to change my views, I cannot disavow anything written in the said editorial. If I am wrong, I am perfectly willing to be set right, and for that purpose open the columns of THE RECORD for a reply, which reply I shall publish with pleasure.

"My only desire is to get at the truth, and I am willing and ready to do anything in my power to that end. If you convince me that I am in the wrong, no one will be more willing to acknowledge it.

"Respectfully yours,

"GEO. F. SHRADY."

The reader's attention is particularly called to the last paragraph of this letter. I thought Dr. Shrady's expressions fair and honorable, and I took him at his word by immediately writing him the following note:

"NEW YORK, *Aug.* 12*th*, 1874.

"DEAR SIR:—I have received your note of the 11th inst.

"It is not for me to defend myself in the columns of THE RECORD from its unjust and unprovoked attack. It is your place to correct and do justice.

"I do not question your sincerity when you state that you are anxious to get at the truth, and if wrong, to make proper acknowledgment.

"I shall therefore be happy to see you at my residence to-morrow evening to show you some of the microscopical preparations, and to offer you other evidence that your editorial was not in reality based on facts.

"Yours sincerely,

"WILLIAM A. HAMMOND.

"DR. GEO. F. SHRADY."

I mailed this note to Dr. Shrady, to the office of THE RECORD, Messrs. Wood's place of business, and then calling to mind that I had not asked whether or not the appointment would suit as to time, I wrote another note requesting Dr. S. to inform me on this point. This note I took myself to the office of THE RECORD, and was informed that Dr. Shrady had left town the day before. It was therefore impossible to get a retraction in the forthcoming number of THE RECORD, to be issued on the 15th of August.

I expressed my disappointment in strong terms to Mr. Wood the following day, when I went to his place of business for the purpose of conversing with him on the subject. I told him what I had written to Dr. Shrady, and he, in my presence, wrote to Dr. S., requesting him, as he said, to come to the city as soon as possible, and to accept my invitation. Mr. Wood said he had no doubt that Dr. S. would take advantage of the opportunity I offered him. Instead, however, of seeing Dr. S., I received, a day or two afterwards, the following remarkable communication:

"BARRYTOWN, *Aug.* 13*th*, 1874.

"DEAR SIR:—Your two notes of the 12th inst. were promptly forwarded, but they came too late to be answered within the time you expected they might have been. I hasten to say this, in order to correct an impression that you may have formed, that any neglect to acknowledge your courtesy was unfounded. I now assure you that I am obliged to you for the invitation, but for the present I wish to be excused from accepting it. I differ with you so entirely as to the manner in which the questions at issue should be settled, that I am either forced to take this stand, or to place myself in what would, in my opinion, be a false position to the readers of THE RECORD. The editorial in question was a public criticism, was made in an official way, and the reply, as I view it, should be made through the same channel. The readers of a journal have some rights in this matter which an editor has no business to ignore. If you have any objections to make to the article, it strikes me you should view it in the light of a public challenge to give your side of the argument.

"If in a private conference you convince me that I have done wrong, I am bound to give my reasons *publicly* for changing my views—in other words, I am forced to be a spokesman for you, or worse than that, an interviewer.

"This I think is altogether unnecessary, as you are abundantly able to speak for yourself, and can present your own views a great deal better than I can. Again, if you cannot succeed in convincing me at the private interview, you deny yourself, conditionally at least, any opportunity of presenting your views at all.

"If you choose to alter your decision in the matter, you shall obtain every courtesy from THE RECORD.

"Your reference to the attack as an 'unjust and unprovoked one' gives me the impression that you may consider that there is a personal element in the case. If you have any suspicion of this sort, I can assure you that it is altogether unfounded, and that the article was written with the sole intention of vindicating the right of independent criticism.

"Respectfully yours,

"GEO. F. SHRADY.

"DR. W. A. HAMMOND."

I think it will be apparent to every intelligent and unprejudiced reader that Dr. Shrady was more anxious to avoid investigation and the possible obligation of a retraction than anything else, and that the "false position" of which he was so afraid could never come from efforts to get at the truth, and if wrong to make suitable acknowledgment, which he expressed himself so ready to do in his first letter.

As to my defending myself in the columns of THE RECORD, that is not my business. He and his publishers have done the wrong, and it is his and their place to retract and apologize. If A calls B a scoundrel and B demands an apology, it would scarcely be adequate satisfaction for A to say to B, "I cannot apologize or even take measures to convince myself that I am wrong, but I will allow you to come to my office and to say to the people who heard me call you a scoundrel, that you are not one."

Dr. S. says: "If in a private conference you convince me that I have done wrong, I am bound to give my reason *publicly* for changing my views."

Yes, that is exactly it. Just as publicly as he uttered the slander, and that is exactly what I demand and will insist upon.

Of course I could have no further correspondence with Dr. Shrady on the subject, but still in the continued effort to avoid the last resort I wrote as follows to Mr. Wood:

"NEW YORK, *Aug.* 22*d*, 1874.

"DEAR SIR:—Contrary to the expectations you expressed to me at our last interview, Dr. Shrady has declined my offer to allow him to inspect for himself the microscopical specimens obtained in the McCormick case, and to examine the other evidence which would have convinced him that his editorial of August 1st was based on false premises. Comment on such (to say the least of it) short-sighted and disingenuous conduct is entirely unnecessary at this time. It speaks for itself.

"Dr. Shrady offers to publish any communication I may send him, and is kind enough to express the opinion that I am abundantly able to speak for myself. It was not for me that I desired Dr. Shrady to speak, but for himself. I *am* able, as he and you will eventually find, to speak for myself, but I prefer to do it through another channel than THE MEDICAL RECORD.

"I am sorry my efforts to obtain a recantation and apology have failed, and I regret it the more because at our last meeting you seemed to be convinced that injustice had been committed, although you expressed yourself as being unable to rectify the wrong without Dr. Shrady's aid. As this has been refused in the only way it was possible for me to accept it, nothing remains but an appeal to an authority which both you and I are obliged to respect.

"Your obedient servant,

"WILLIAM A. HAMMOND."

To this letter I received the following answer:—

"NEW YORK, *Aug.* 24*th*, 1874.

"DEAR SIR:—Your favor of the 22d inst. is received. From it we perceive that you misunderstood our remarks at the interview referred to. We stated not that we were unable to rectify the wrong without Dr. Shrady's aid, but that the matter lay *entirely* in Dr. Shrady's hands, and that by our contract with him, as editor of THE RECORD, we had no power to direct his management of the journal, he being its published and responsible head; we further said that if the facts of the case were as you represented, it *seemed* as if an injustice had been done you, but we did not and would not, even if the circumstances were known to us upon which the editorial was based, presume to judge upon subjects so entirely professional. We shall be sorry if this difficulty between yourself and THE MEDICAL RECORD cannot be amicably settled by the proper parties, and in a satisfactory way, but do not desire to be considered, from anything we may have said, as wishing to avoid any right responsibility which may attach to us as its publishers.

"Dr. Shrady will be in town to-morrow or next day, and will, we presume, look further into the matter.

"Sincerely yours,

"WILLIAM WOOD & CO.

"WILLIAM A. HAMMOND, M.D., New York City."

This letter was dated the 24th. I waited till the 31st, and having no intimation that Dr. Shrady was looking further into the matter, have begun proceedings against Messrs. William Wood & Co., the publishers of THE MEDICAL RECORD, for libel. I am sorry to be obliged to take this course. Mr. Wood has in his personal relations with me in this matter been frank, kind, and considerate, and I have no other than friendly feelings towards him. I appreciate his position, but I can see a way for him to right himself and me, which, as a man, a gentleman, and above all in this connection, a member of a religious society whose main principle is peace, I think he ought to take. As for myself, I am determined, if the law of the State of New York admits of it, to get redress for the gross outrage which, under the name of "independent criticism," has been perpetrated.

One thing only remains to be considered, and that is my defence against the false innuendoes and assertions of THE RECORD. Most of them are sufficiently answered in the paper published in the *New York Medical Journal* of this date, and reprinted in the present number of the *Psychological and Medico-Legal Journal*, and to which this writing is an appendix. Two other charges—the worst made against me directly—are met and settled by the following correspondence with Dr. Hadden, McCormick's physician, and Prof. Arnold, the Curator of Bellevue Hospital:

"NEW YORK, *Aug.* 15*th*, 1874.

"DEAR DOCTOR:—In an editorial published in THE MEDICAL RECORD of August 1st it is said:

"'It was scarcely fair in Dr. H. [Hammond] to appropriate all of interest in McCormick's brain,' etc.

"As you requested me to make the autopsy and the microscopical examination, I would be glad to have you state whether or not in your opinion my action was improper in any respect.

"Yours sincerely,

"WILLIAM A. HAMMOND.

"DR. ALEXANDER HADDEN, 155 E. 51st Street, New York."

"NEW YORK, *Aug.* 18*th*, 1874.

"DEAR DOCTOR:—When I received the consent of the friends of McCormick to hold a post-mortem examination of his body, I placed the matter in your hands for the two obvious reasons: 1st, that you had been the consulting physician in the case; and, 2d, that you were a specialist in diseases of the nervous

system. This was before the coroner was notified. The statement that you took all the specimens of interest in the case is not true; none were denied the privilege of taking what specimens they wished, and some did. That you took all the specimens that became of interest would be true.

"Yours truly,

"ALEXANDER HADDEN, M.D.,

"155 E. 54th Street.

"WILLIAM A. HAMMOND, M.D., West 54th Street."

"NEW YORK, *Aug.* 15*th*, 1874.

"MY DEAR DR. ARNOLD:—In an editorial published in THE MEDICAL RECORD of August 1st, it is stated:

"'It was scarcely fair in Dr. H. to appropriate all of interest in McCormick's brain, as we understand he had likewise done at the Entwistle post-mortem before the arrival of the Curator of Bellevue made it necessary for him to deliver up two or three thin slices.'

"Will you be kind enough to tell me whether or not the foregoing extract is correct in statement?

"The facts as I understand them are, that you were absent when the post-mortem was begun; that it was said you would not be present; that Dr. Knox, who made the post-mortem, authorized me to take the medulla oblongata; that on your arrival I at once without hesitation offered the whole of it to you; that you said you only wanted part; that I insisted on your taking the whole, and that I took nothing whatever except a few slices from the cortical substance of the brain, which I did with your sanction.

"Yours sincerely,

"WILLIAM A. HAMMOND."

"MILFORD, PA., *Aug.* 18*th*.

"Prof. W. A. HAMMOND.

"MY DEAR DOCTOR:—Your note of 15th has been forwarded just now. The matter is very simple indeed. I was a little late the day of the post-mortem of Entwistle, and as soon as I arrived you handed me the vial containing the medulla oblongata, and I gave you some pieces of the brain myself which had been removed before my arrival. The rest of the post-mortem was made under my immediate supervision. The case, as stated in the extract from THE RECORD (which as yet I have not seen, being in the country), is not true at all. Trusting my delay in replying has been no inconvenience,

"I am very sincerely yours,

"J. W. S. ARNOLD."

The remarks of THE RECORD relative to the publications in the *New York Tribune* are answered in the article immediately preceding the present; but it will probably scarcely be believed that the editor of THE RECORD, who affects such righteous indignation at the publication of medical matters in secular journals, was himself an applicant for the position of medical correspondent of the New York *Tribune*, to report for that paper the proceedings of the Detroit meeting of the American Medical Association!

I think I can now leave the members of the medical profession who may read what I have said and brought forward relative to the attacks of a few members of a coroner's jury and THE MEDICAL RECORD to form their own opinions.

As to the Ishmaelite of the *Philadelphia Medical Times*, who has presumed to dabble in the matter, he is being so heartily punished by our Western brethren for his slanders on them, that in mercy I stay my pen.

WILLIAM A. HAMMOND.

NEW YORK, *Sept. 1st*, 1874.

Reviews and Notices of Books.

CYCLOPÆDIA OF THE PRACTICE OF MEDICINE. Vol. I. Acute Infectious Diseases. Part 1. Typhoid Fever, Prof. Liebermeister; Typhus and Relapsing Fevers, Cholera, Prof. Liebert; The Plague, Prof. Liebermeister; Yellow Fever, Dr. Haenisch; Dysentery, Prof. Heubner; Diphtheria, Dr. Oertel. German edition edited by Dr. VON ZIEMSSEN. Wm. Wood & Co., New York.

THROUGH the kindness of the American editor we have had the privilege of looking over some of the advance-sheets of this magnificent work, and have thus got a foretaste of the rich treat in store for the medical world. Liebermeister's introduction to the subject of acute infectious diseases, to which the first volume is devoted, and his article on Typhoid Fever, are masterly efforts. The subjects, in their various phases, have been ably and thoroughly digested, and cannot fail to merit profound attention. The author's style is easy, simple, and colloquial, and he manages to intersperse such an array of interesting facts through the pages that he holds the attention of the reader during the discussion of each important topic. His final conclusions are stated with clearness and precision, so that there can be no doubt as to his individual views on the subject.

The chief value of a book of this kind lies in its completeness. The entire range of medicine is, at present, so large that our every-day text-books fail to grasp the entire matter; indeed, it is impossible to condense it into a single volume of ordinary size. This present cyclopædia aims to exhaust the subject, practically, by furnishing all that is really valuable within the domain of practical medicine.

To accomplish a task of such magnitude, it was necessary to employ a large number of collaborators, giving each of the different subdivisions of the work to men who had devoted special attention to the topics included under them, and whose experience and well-known position would give the requisite authority to their views. By reference to the list of authors, it will be seen that this has been very happily done, and the names of Professors Liebermeister, Lebert, Rindfleisch, Wagner, Schroeder, Thomas, and others, well known as able writers and clinical teachers, assure us that we may expect that their work will be thorough and exact in every particular, and contain the practical views which are called for by the profession at large. There is another advantage, too, connected with such a large corps of workers, that is, we may expect the completion of the whole edition within a reasonable period of time; and, there is little doubt, if the present rate of publication is sustained on the other side of the water, the whole work may be completed much earlier than was at first proposed.

It seems to be perfectly proper that German writers should assume the responsibility of this undertaking. During the last ten years, the Germans have been the foremost of all nations in the field of medical investigation, and they have made real progress by long and careful experimental studies that have shed important light on both the etiology and pathology of disease. We and other nations have been content rather to stand by and approve or disapprove of their views, according as the results they have published have agreed with or varied from our own experiences. The labors of Virchow, Cohnheim, Recklinghausen, Stricker, and others have been masterpieces for the

rest of the world, and the position they hold is proved by the number of students that have collected about them, and the enduring character of their teachings and writings. No students of medicine have brought more erudition to their work, or have compiled statistics or classified results with more care and exactness.

We have special need of a book of this kind at the present time. There are, it is true, an abundance of books on the practice of medicine. We have Flint, that has never been surpassed as a text-book for students, and a book of ready reference for practitioners. The force of its logic, its simple and practical teachings, have left it without a rival in the field. But we need a more complete book. Among the more recent books we have Aitken, and may soon have the completed edition of Reynolds, but they neither of them correspond to our present wants. Aitken is justly regarded as unsatisfactory; for while the description of diseases is tolerably complete, it is not sufficiently so as a book of reference for practitioners, nor does it emphasize the facts with sufficient force to be useful for students. Reynolds is far more exhaustive, and, appearing under the form of a collection of monographs, each writer lays special stress on the views that his experience has led him to adopt; more decided reliance may, therefore, be put upon the opinions expressed by each one. Yet this book will probably not exceed 4,000 pages, if the plan originally proposed be adhered to, and four volumes only are issued. Ziemssen, on the other hand, will contain at least 10,000 pages, or two and a half times the number in Reynolds, and we may fairly expect that the additional 6,000 pages will contain a corresponding increase in valuable material. It may be proper to add here, that two new features will be introduced. The nomenclature of diseases and the system of weights and measures will correspond with our American usages as far as possible, but when the decimal system is employed the American equivalent will be annexed. The bibliography of the subjects will be added for purposes of reference, and we may further add, that there will be a goodly number of illustrations. Such a book, complete in itself, is needed by every practitioner. He frequently meets with cases where a disease assumes a novel type, developing symptoms that have not previously been noticed in the text-books, or a rare form of disease not usually described breaks out in his locality. He feelst hat he wants advice such as he might obtain from a consultant, whose large experience in public hospitals or other institutions would have given him the opportunity of seeing disease under the most varying phases. Such advice is not within the reach of all; indeed, only those that are fortunate enough to live within a limited distance of the great centres can expect to obtain the benefit of such assistance. For these practitioners, and they are in the great majority, a complete handbook of medicine will be really valuable, and in fact indispensable, supplying them, as it will, with the aid they want in the hour of their need.

By referring to the list of articles we find a large number that have never before been treated in a book on the practice of medicine. Special volumes, too, are devoted to diseases of the skin, nervous diseases and diseases of the female genital organs, subjects which usually appear in independent treatises. Public hygiene also receives a large share of attention; indeed it is interwoven through a large number of the articles. The latest phases of the doctrines of etiology and pathology in diseases will also be ably discussed, if we are to judge by the way in which Liebermeister supports his views of a *contagium vivum*, and we presume that the same spirit will animate the rest of the work.

The American translation appears to be satisfactory so far as we have seen it. An effort has been made to free it from German phrases and cumbersome expressions of all kinds, so that it reads in many places with elegance, and generally with smoothness. It is to be hoped the rest of the work will be finished in an equally acceptable manner. There have been so many bad translations foisted upon us, that we should not be ready to accept any but the best work. The list of translators includes many familiar names already known to us by their contributions in the line of original investigations, and they are a guarantee, in some sort, of the character of this work. Translation is not an easy task, though it may seem so to many; for it is one thing to be able to get a fair idea of the sense from a hasty perusal of the text, and quite another thing to render it in a good readable shape. The one involves a very moderate amount of acquaintance with the language, the other an appreciation of its refinements that can only be gained by a long course of study or the familiarity resulting from speaking it or hearing it spoken frequently. The task of translating has been divided among about fifty gentlemen in various parts of this country, a fact which in itself argues well for the character of the education, as well as for the enthusiasm of our medical men; for it is extremely doubtful whether a similar number of men could be found elsewhere who would be willing and able to undertake it.

This edition is under the supervision of Dr. A. H. Buck, well known to the profession as the American editor of Stricker's Histology, and a frequent contributor in certain branches of medical literature: his name assures us that the revision will be thorough and exact.

We are glad to see that the type is entirely new, and of large size, so that the text is clear and legible. The paper, also, is of excellent quality. The profession of this country and of England are under no small obligation to the enterprising publishers who have had the boldness to undertake a work of such magnitude, involving as it must so large an investment of capital. We trust, as we confidently expect, that they may be amply repaid. We have just heard that a firm in France have made arrangements for translating and publishing the work, and that it will appear shortly in the French language.

THE PHYSIOLOGY OF MAN, designed to represent the Existing State of Physiological Science as applied to the functions of the human body. By AUSTIN FLINT, Jr., M.D., Prof. Physiology and Pathological Anatomy in the Bellevue Hospital Medical College, New York, etc., etc. Vol. v., Special Senses: Generation. New York: D. Appleton & Co. 1874.

THIS volume is the fifth, and the completing one, of a series commenced in 1866. When the first volume, on Blood, Circulation, and Respiration appeared, eight years ago, it was a surprise to the profession of this country, as much on account of its exhaustive treatment of the subjects, as the promise at that time given that it would require four other volumes of equal size to complete the work. Notwithstanding the magnitude of the undertaking one volume after the other made its appearance at regular intervals, each one a surprise in itself; and the fifth, which is now upon our table, is equal if not superior to any of its predecessors.

Prof. Flint, Jr., has proved himself eminently

qualified for the work so creditably performed. A teacher of this branch for many years in one of the largest medical schools of the country, he has had facilities for the practical study of this department of science second to none, and this, coupled with a love for his branch which amounts to enthusiasm, he has spared neither time nor labor to give us the best series of text-books to be found anywhere. Not only has he labored faithfully to prove positions taken by others in the various departments of physiological study, but he has given the profession many original views which are of great value as contributions to science. Notably in this connection are to be mentioned his proof that the *besoin de respirer*, or sense of the want of air, is due to the want of oxygen in the general system; his discovery of the condition which he termed cholesteræmia, the demonstration that sugar was produced in the liver during life, and his investigations on the physiological effects of severe and protracted muscular exercise, with special reference to its influence upon the excretion of nitrogen. These described have been given to us in the first four volumes, and the author states that he has found no reason to modify his opinions with regard to them.

The present volume takes up the consideration of the special senses. He devotes chapter i. to the special sense of touch, giving its general and then its special characters, comprising the variations in tactile sensibility in different parts, the appreciation of temperature, etc. The next chapter is devoted to olfaction, which is interesting and instructive, giving in a general way the physiological anatomy of the olfactory apparatus, and preparing the reader to appreciate the details of chapters vii., viii., and ix.

Chapters iii., iv., v., and vi. are devoted to the physiological anatomy of the optic nerves, eyeball, and its different tunics and humors; the laws of refraction, dispersion, etc.; the movements of the iris, accommodation, etc.; and binocular vision.

The topographical anatomy of the ear, the physics of sound and the uses of different parts of the auditory apparatus are discussions of singular merit, but more especially the latter, which presents us with the best account of the mechanism of this apparatus in detail, which we have ever read. In this connection we would refer particularly to the admirable description of the organ of Corti, illustrated by two very fine engravings. Gustation forms the subject of chapter x. All the apparatus connected with this function is quite minutely described; its relations with the sense of smell, with facial paralysis, and paralysis of the tongue.

The sense of taste is believed to be located in the dorsum of the tongue, to which portion of the organ the ultimate filaments of the glosso-pharyngeal and chorda tympani are distributed.

The remaining nine chapters are devoted to generation and the development of the embryon. The organs of generation are described, and their respective functions explained, after which the ovulation is discussed, then fecundation, and finally the development of the new being from the segmentation of the vitellus up to its entrance in the world. In regard to the entrance of the spermatozoid into the uterus, our author places a great deal of confidence in the observations of Dr. Beck, of Indiana, who noticed an orgasm in a patient while under treatment for uterine disease. During the orgasm, Dr. Beck states, "the os opened to the extent of fully an inch, made five or six successive gasps, drawing the external os into the cervix each time powerfully, and at the same time becoming quite soft to the touch." It is unfortunate, however, that the female was not in a strictly physiologically sexual condition at the time, having been a sufferer from uterine disease for more than eight years. The observation of Litzmann, which the author quotes, is, however, more to the point. Alluding to the statement by Després, that a fluid secreted by glands in the cervix, which is ejaculated during the orgasm and facilitates the entrance of spermatozoids, our author says: "Assuming that the views just stated be correct, we can readily understand how the neck can be erected and hardened during the orgasm, extruding an alkaline mucus, that the semen is ejaculated forcibly toward the uterus, and becomes mixed with the mucus, and that the sudden relaxation of the cervix and opening of the os may exert a force of aspiration and thus draw in the fecundating elements. Certain it is that spermatozoids may be found in the mucus of the cervix a very short time after coitus." This may be a remarkable explanation of the fecundating act on health, but is, as our author intimates, inadequate to explain fecundation in those cases where there is no female orgasm, insufficient penetration, and like impediments. Beyond this, however, in the present state of our science we cannot go for an explanation.

Once in the cervical mucus, the spermatozoids pass through the uterus in a manner not exactly known, and thence through the Fallopian tubes, where they fecundate the ovum either at the entrance of said tubes or in the dilated portion near the ovary. The escape of the ovum and its entrance into the Fallopian tube is described in a very satisfactory and clear manner, and must, we think, in view of any better explanation, be accepted:

"If we take into account the situation of the ovaries and the relations of the Fallopian tubes, we can understand how an ovum may pass into the tube without invoking the aid of muscular action. Let us suppose, for example, that a Graafian follicle be ruptured when the fimbriated extremity of the tube is not applied to the surface of the ovary. One of the fimbriæ, longer than the others, is attached to the outer angle of the ovary, and presents a little furrow or gutter, leading to the opening of the tube. This furrow is lined by ciliated epithelium, as indeed is the mucous membrane of all the fimbriæ, the movements of which produce a current in the direction of the opening which we might suppose would be sufficient to carry a little globule, only $\frac{1}{125}$ of an inch in diameter, into the tube. At the same time, there is probably, as has been suggested by Becker, a constant flow of liquid over the ovarian surface, directed by the ciliary current toward the tube; and when the liquid of the ruptured follicle is discharged, this with the ovum takes the same course."

In regard to the difference between the corpus luteum of menstruation and that of pregnancy, the accuracy of the investigations of Prof. John C. Dalton, of this city, are very deservedly complimented and endorsed.

The period at which conception is most likely to occur is still an open question, although the greatest weight of evidence leans towards the time immediately succeeding menstruation. Far from this being absolute, however, our author states that there is abundance of proof that the spermatozoids may be lively and liable to impregnation during the whole or any part of the period between the menstrual epochs. The development of the embryo, as we have before intimated, is traced from the first change in the ovum up to the period of birth, and is an admirable, comprehensive, interesting, and intelligent account of this wonderful process. This portion as well as many

others of the work is suitably illustrated with excellent engravings, and although very few are original, those that are given show great discrimination and taste on behalf of the writer. This remark applies particularly to the superb woodcuts which are taken from Dalton's "Physiology," and which tend so much to elucidate the early stages of the growth of the embryo.

In conclusion, we would reiterate the statement that this work takes a well-merited rank with its predecessors in the series, and they as a whole form the most complete and trustworthy work on physiology to be found in any language.

Reports of Hospitals.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 24, 1874.

DR. H. KNAPP, PRESIDENT, in the Chair.

EXSECTION OF THE HEAD OF THE HUMERUS.

DR. SAYRE presented the upper extremity of the humerus of a man aged 32. The patient was of robust constitution, of healthy parents, and no hereditary taint. He was admitted into Bellevue Hospital last November, suffering from inflammation of the right shoulder-joint. No cause was assigned for the trouble except violent muscular exertion. The arm was stiff from muscular contraction and intensely painful. Finally an abscess appeared on the inner and anterior portion of the arm, opening and discharging a large quantity of pus. No dead bone could be detected on probing. Following this, another abscess formed on the inner side of the arm, an inch and a half higher, and this likewise opened. Both abscesses discharged freely. Although no dead bone could be detected, Dr. Sayre concluded that the joint was involved, principally for the reason that the abscesses discharged a peculiar gelatiniform material, and the disease was of such a long duration. He made an explorative incision through the posterior part of the deltoid muscle. The head of the bone was found to be carious, with its cartilage of incrustation destroyed. The section was made through the anatomical neck, but the bone having been found diseased at that point, another slice was removed. The surface of the glenoid cavity was eroded and was scraped off by the elevator. The entire wound, with the exception of the most dependent portion, healed by first intention.

MYXOMA AND ENCHONDROMA OF THE THIGH.

DR. SAYRE presented a second specimen, which was a tumor of the femur. The patient was a male aged twenty-one, who had been brought into Bellevue a week before the meeting of the Society. Two years ago while carrying, in company with others, a heavy bar of iron on a railroad, his foot was caught in the track and he suffered a violent wrench, which gave him the sensation of something having given way on the inside and back part of the knee-joint. In the course of a week or so after, continuing to walk around as usual, he noticed a hard round swelling the size of a bird's egg growing from the inner condyle. This tumor grew gradually for six weeks, at the end of which time it was the size of a lemon. About this time he took some violent exercise in running, which increased the activity of the growth of the tumor, at the same time causing it to become inflamed. He continued, however, at his work for a year more, and at the time of his admission to hospital the growth measured around the knee twenty-seven inches. It had the form of an irregular knob, was whitish at the base, and red on the summit, while pressure on the surface gave the sensation of the crackling of an egg shell.

The fluctuation at some points was quite distinct. The point of a hypodermic syringe was introduced into the most prominent portion of the tumor, but no fluid could be drawn out. On removing the beak, however, a straw-colored gelatiniform mucus exuded in great quantity from the opening made. This discharge kept up during the remainder of the day and night, and Dr. Hunt was compelled to arrest it the day following. The tumor, from the loss of the fluid, diminished an inch in circumference.

The thigh was amputated very near its middle, June 24th. On laying open the tumor it was found to be made up of sharp spicula of bone. The growth seemed to spring from the periosteum at the inner condyle of the femur, that membrane stretching itself over the tumor. The spaces of the tumor were filled with the gelatiniform tissue before alluded to. On sawing through the longitudinal axis of the bone and tumor, the medullary canal at the upper portion and just below the section was found to be the seat of enchondroma. The tibia did not seem to be involved in the tumor, but at its lower portion was the seat of a roundish enchondromatous mass springing from the spine of the bone. In conclusion, Dr. Sayre remarked that had he made the amputation lower down, he would have gone through healthy osseous tissue, and the enchondroma alluded to would have been overlooked.

DR. JANEWAY examined the growths microscopically and pronounced them of a mixed variety, partly myxomatous and partly enchondromatous.

INCARCERATED HERNIA.

DR. E. MASON exhibited a specimen of hernia occurring in a patient of Charity Hospital. A female, sixty years of age, was admitted with phlegmonous erysipelas of the leg and foot, which resulted in ulceration of the dorsum of the latter two months afterwards. May 26th, she was seized with great pain in the abdomen, attended with nausea and vomiting. At this date, she called the attention of the house-surgeon to two tumors in the groin. These were made out to be oblique inguinal herniæ. One on the right side was readily reducible, and had, as she stated, existed seven years; the other, on the left side, the size of an English walnut, was not reducible at that time, and has existed eighteen months. An attempt was made to reduce the latter tumor, but failed, and ice was applied, and was allowed to remain on all night. In the morning, all the unpleasant symptoms, pain, nausea, and vomiting had been relieved, and in addition she had a movement of the bowels. The tumor was then regarded as incarcerated hernia, although not strangulated.

THREE SPECIMENS OF GLIOMA RETINÆ.

DR. H. KNAPP presented three eyeballs affected with encephaloid cancer, and made, in substance, the following remarks:

Two of the specimens, the first to be described and the third, I owe to the kindness of Dr. E. WILLIAMS, of Cincinnati; the second is derived from my own practice. The first specimen was taken on Feb. 21, 1874, from a rather delicate sallow girl of 12 years. A week before, one of her playmates discovered a peculiar, shining reflection from her pupil, and on covering her other eye the patient noticed that the one was blind. Glioma was diagnosed, the eye enu-

cleated, and kindly sent to me for examination. A meridional section showed the whole retina detached and corrugated, passing as a straight chord from the optic nerve towards the crystalline lens, where it expanded laterally and connected with the posterior portion of the pars nonplicata corporis ciliaris. The outer (parietal) surface of the corrugated retina was uneven, and at its anterior and transverse parts markedly nodular. The section surface was in some places granular, in others finely striped, generally white, with some black spots. Under the microscope the whole retina was found to consist of the well-known small round cells lying closely together in a granular or striated matrix. The nodules in the anterior part showed the typical glioma structure. Their greatest development could be traced to the pars ciliaris retinæ, and it seems that the growth originated in that locality. The black spots contained the same kind of cells as the other portions, and, in addition, a great many small round, or irregular pigmented cells, as well as dispersed granules of pigment. This condition appeared to be the result of hemorrhage.

The case has some unusual features: 1. The extensive pigment of patches. 2, the greatest development, and probable origin of the growth, in the anterior, *i.e.*, ciliary portion of the retina. 3. The somewhat advanced age (12 years) of the patient; glioma of the retina being usually observed in children under 8 years of age. The prognosis is rather favorable, as all the other structures of the eye, the optic nerve included, were unaffected, as furthermore there was a moderate amount of fibrillary substance between the cells, showing a less vigorous tendency to proliferation than is commonly witnessed in encephaloid cancer. The age of the patient is probababy another favorable condition concerning the probability of a permanent recovery.

The *second specimen* presents the ordinary conditions of glioma retinæ. The whole posterior space of the globe, from the optic nerve to the posterior capsule of the lens, is filled with a soft, white, exceedingly vascular, brain-like substance. The retina is not to be traced; the optic nerve, choroid, ciliary body, and the other structures of the eye, are unaffected. I removed the specimen, a few days ago, from a child, æt. two years, of pale and sallow complexion, who, in all probability, will soon die from the generalization of the malignant retinal tumor. Three weeks before its removal, the blind eye had become painful, injected, hard, and somewhat enlarged. The pupil was wide, immovable, and through it a dull yellowish substance, filling the vitreous chamber, was seen.

The *third specimen* was taken from a well-developed and intelligent boy of about 4½ years of age. About two years previously a white spot had first been noticed in the pupil, which gradually enlarged and destroyed the vision. The physician called it cataract, and the sight had been totally abolished about a year. Five weeks previous to the operation the eye began to protrude and was painful. The patient also suffered a good deal with pain in the bowels. At the time of the operation the eyeball was displaced before the eyelids, which contracted behind it. The cornea had sloughed away, and from the interior of the globes protruded a dark, reddish-brown, soft substance which easily bled. The eyeball was enucleated by Dr. E. Williams in March, 1874. The optic nerve, being enlarged, was removed as near the optic foramen as was practicable. Its proximal (cerebral) end, being still large and lardaceous, left no doubt that the disease had extended into the cranial cavity. The child recovered from the operation in a few days, and though no symptoms of secondary tumors could at the time be detected, yet death must soon follow. The eyeball has about double the normal size, and has the shape of a goblet. The sclerotic in the ciliary region is thinned and studded with bosses such as we see in hydrophthalmic eyes. The whole eye is filled with encephaloid substance. The thickened optic nerve shows a degeneration by the same morbid elements which are dispersed through its connective tissue and bundles of the nervous fibres, a small part of which are preserved. There are some episcleral tumors around the optic nerve, but not in connection with it. On careful dissection the place is found in which they communicate with the intra-ocular growth. In this place, which has about a line in diameter, the sclerotic is thinned and softened, yielding readily to the probe, but offering still so much resistance as to show that the fibrous tissue is not wholly destroyed by the pseudoplasm, but pierced and macerated.

These three specimens, Mr. President, present three different stages of encephaloid cancer of the eye: in the first the disease is still limited to the retina, and no symptoms of inflammation or irritation annoy the patient; in the second the globe is filled with the pseudoplasm, is hard, painful, and inflamed (glaucomatous stage); in the third the globe is perforated, mostly in the cornea, the sclerotic is bulging, and the growth extends into the orbit and the brain. In this stage the majority of the patients die. The fourth stage, the formation of metastatic tumors, is very readily met with.

MULTIPLE EMBOLISM, WITH HEMORRHAGIC INFARCTION OF THE PIA MATER, LUNGS, KIDNEYS, AND SPLEEN; GANGRENOUS DEGENERATION OF THE LATTER.

Dr. Satterthwaite presented the heart, kidneys, and spleen, with portions of the brain and meninges, and also portions of the lungs, removed from a gentleman who died suddenly on the twenty-second of June. The patient had been chiefly under homœopathic treatment, but during the latter stages of his illness had called in two well-known practitioners in regular standing. He was seen but three times by these gentlemen. At their suggestion Dr. Satterthwaite performed the autopsy. A complete history of the case could not be obtained, for obvious reasons, but the main facts were as follows:

About the middle of April, the patient was taken sick with some form of fever, which lasted four or five days; confining him to his room. After recovery from this attack, but before leaving the house, the patient thought he caught cold, and feeling decidedly unwell, took to his bed and never left it. During the first two or three weeks the temperature never exceeded 100° F., and varied between that and 98° F. The rapidity of the pulse was noted at this time. It was so marked, that when he sat up, it would reach 140–150, and on one occasion even rose to 165. During the last two weeks of his life, it varied between 120–150 and, the temperature between 102° and 105° F. At an early period a diagnosis of endocarditis, with aortic obstructions, was made out. The respiration was never embarrassed except on assuming the upright posture. It is said that there was no impairment of sensibility or motion, nor did the patient suffer any pain except on a single occasion when his chest was examined, some two and a half weeks before death. His physician was assisting him to turn over on his left side, when he called out suddenly, "You have killed me," at the same time placing his hand over the region of the spleen, and groaning with pain. He recovered from

this paroxysm, and never again alluded to pain at that point. Latterly he lost a great deal of flesh, and became so weak that examinations of the chest were made with difficulty. It was added that percussion of the internal viscera failed to detect any abnormal variations in their size.

The urine was examined, but neither albumen nor casts were present. There was no retention until within the last twenty-four hours of life. Consciousness was clear up to the end, though it was apparent that for a long time previously he showed indifference to what passed about him.

On making the autopsy, the dura mater was found a little adherent, and a few flakes of fibrine showed themselves on the surface of the pia mater. This membrane was somewhat thickened, and showed over the convexity of the brain small whitish points surrounded by areas of extravasated blood. These whitish points varied in size from the head of a pin upwards, and were found on microscopic examination to be formed by small collections of a fibrinous material; they were in the calibre of the minute vessels of the pia. The thickening was not due to recent inflammation, as shown by the microscopic examination. The vessels at the base of the brain were free from atheroma and were empty. No emboli were found in any vessels of the brain, nor was there an undue amount of fluid there.

The heart was found hypertrophied, especially the left ventricle. In the aortic orifice there were calcareous concretions and several vegetations. The stenosis here was so great as barely to allow the first joint of the little finger to pass. The aorta itself was somewhat atheromatous. The kidneys were enlarged, and showed hemorrhagic infarctions of dark and light colors. The capsules were not adherent except in a few places. The cortex was marked with the peculiar stellate distribution of the minute vessels often seen in nephritis. The testes were generally contracted, and there was an increased amount of intertubular tissue, such as is observed in intestinal nephritis.

The spleen was found enormously enlarged, measuring about nine inches in length. About one-third of its substance had undergone gangrenous degeneration, while the remainder of it was marked by hemorrhagic infarctions of various ages, some of deep-red color and others of a dirty-brown or yellow, with commencing cheesy degeneration. The capsule was still perfect, and when open discharged from a pint to a pint and a half of a dirty grumous fluid, having an offensive odor. In the lower lobes of both right and left lungs were hemorrhagic infarctions of large size. The liver contained none, but was fatty. These specimens were referred to as exhibiting the lesions that may occur in a case of multiple embolism.

The originators of the mischief were the vegetations at the aortic orifice. Smaller and larger portions of these bodies were swept away by the blood-current and driven onward until they became impacted in blood-vessels too small to admit their passage; venous stasis and extravasation then followed, giving rise to the so-called hemorrhagic infarctions. Owing to the small size of the bronchial arteries and the large size of the infarctions in the lungs, it seemed probable that the latter were produced by thrombi from the spleen, which, taken up and carried into the right side of the heart, entered the lungs by the pulmonary artery. The degeneration of the spleen was due to the breaking down of one or more large infarctions, for they were found to be continuous with the gangrenous sac.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from August 19, 1874, *to September* 4, 1874.

SMITH, A. K., Surgeon.—Granted leave of absence for 30 days, on Surgeon's certificate of disability. S. O. 135, Department of the Missouri, August 26, 1874.

WRIGHT, J. P., Surgeon.—Relieved from duty at Fort Hays, Kansas, and assigned to duty as Chief Medical Officer, District of New Mexico, Santa Fe, N. M. S. O. 132, Department of the Missouri, August 22, 1874.

MONROE, F. LE B., Assistant Surgeon.—Granted leave of absence for one month, provided he furnishes a suitable substitute during his absence. S. O. 139, Department of the South, August 29, 1874.

STEINMETZ, WM. R., Assistant Surgeon.—Assigned to temporary duty at Fort McHenry, Md. S. O. 183, A. G. O., August 21, 1874.

Medical Items and News.

SIR WM. GULL, OF LONDON.—That Sir Wm. Gull does not owe his success in life to adventitious aids is evident enough. He was the son of a poor farmer—a laborer who tilled a small plot of ground, the property of Guy's Hospital. He attracted the attention of the Treasurer of the Hospital as a bright lad, and was given a place as bottle-washer in the drug-room of the hospital. He was given the opportunity also to have some instruction, entered as student, graduated with honor, became house-physician, assistant physician to the hospital, physician, and lastly consulting physician, his present place. These facts are well known, yet he is created Baronet, and welcomed into their ranks by the most exclusive aristocracy on the globe. He is no common man, whatever may be said of him, who can carve out such a career for himself, and from a charity lad become the foremost physician of the greatest city of our modern civilization. Gull is said to be so closely occupied that patients have to make engagement days in advance of the time."—London correspondent of *The Clinic*.

DR. WASHINGTON ATLEE has been elected President of the Pennsylvania State Medical Society for the ensuing year.

A LOST CASE.—A physician in Vienna, Wis., who recently sued a man for services rendered in the treatment of his son for fracture of the thigh bone, lost his case. The local paper says that after the plaintiff had proven his case and rested, counsel for the defendant moved for a nonsuit, under chapter 95, laws of 1867, which in effect provides that no person practising physic and surgery shall be allowed to collect fees for services rendered unless he is a graduate of some medical college, or is a member of the State or some county medical society. The lawyer claimed that the plaintiff's duty was to prove he was a graduate, or was a member of one of the societies mentioned, and inasmuch as he had not done so, the defendant was entitled to a nonsuit. The motion was sharply resisted by the counsel for the plaintiff, but the defence sustained the theory by authorities, and the Justice dismissed the case.

Medical Department of Life Insurance.

THE INFLUENCE OF MALARIA ON LONGEVITY.

By J. R. BLACK, M.D.,

NEWARK, OHIO.

THERE are two grand sources of disease essentially distinct in their origin, to wit, the one in which man is himself the causative agent, and the other in which nature is supposed to be the *fons et origo*. Of the latter, malaria, as a fruitful source of disease, is considered as occupying by far the most prominent place, and as such deserves thoughtful consideration. That which is a source of disease becomes also by natural sequence a source of untimely death, of defective constitutions, and of structural faults in some organs of the body.

When, however, an attempt is made to gauge its power in these respects, and especially the influence it exercises in the development of secondary diseases, or as a complication of others, and the part it thereby plays in the curtailment of life, the intricate complexity of the problem becomes discouragingly apparent. In fact, the formation of a strictly accurate estimate of the influence of any single cause of disease and of untimely death is, from the nature of the case, impossible. Individuals exhibit almost every possible shade of constitutional defect, of special taints in blood, affecting and modifying in innumerable ways the impress of an external deleterious agent, and thus present almost every grade of yielding or of resisting power. Then, there are scores of transient modifying influences for or against the action of a morbific cause, which are often capable of turning the scale toward health, or toward aggravation and death. The knowledge, therefore, of the power of malaria over life for evil can only be approximative, approaching accuracy in proportion to the breadth of information, the opportunities for extended comparison, and the care and judgment with which deductions are drawn. Even in estimating the direct effects of malaria we should be led into error did we fail to note the remarkable influence of acclimatization in its preservative power over healthy life.

Deport a hundred Germans, a hundred New Englanders, among a like number of the indigenes of a malarious region, and the exemption and susceptibility to its influence would be strikingly apparent. New elements of the problem would also be manifest. The Germans as a whole would resist the malarious influence better than the New Englanders, though some of the former would suffer from periodic fevers to an intense degree. The solution of the cause of these differences is not difficult to the careful observer. The superior constitution of the German, his simple, regular, and primitive way of living, enable him to resist any untoward external condition better than the more tender and luxurious New Englander; but some of the former, on account of their uncleanly habits, and their careless way of crowding a large family into small unventilated apartments, lay themselves especially liable to inveterate attacks of malarious fever.

Whatever may be the opinion as to the essential nature of malaria, it is an agent or condition that acts with redoubled force when aided by some causes which deprave the purity of the blood, and the health of the body. Additional illustrations of this are frequent. Persons who have spent an average lifetime in a malarious region without once exhibiting any of its visible effects, are almost sure to suffer from some periodic fever, should their health be undermined by any other cause.

Not only does the influence of malaria hasten the appearance of a gathering morbid process, but it complicates its action when in full operation, and it lingers and prolongs systematic disorders after the main acute disease has disappeared. It is a question whether malaria, by hastening the appearance of some latent cumulative disorders, does not sometimes render them more mild, or abort them altogether. For example, the consciousness of not being quite as well as usual often precedes for a long time the onset of some protracted and dangerous disease. The lowering of the health tone which thereby exists gives, in a malarious region, that supposed emanation a power over the system which otherwise it could not possess—developing, it may be, an attack of remittent fever, which so changes and renovates the blood that the sense of the original and slight impairment of the health is forever removed. This fever being one of the least destructive to life, eliminating in its course large quantities of biliary matter, cutaneous and intestinal excretions, is it not highly probable that it may in this way carry out of the body other elements of some forming disorder? At the least, those who have had much to do with this disease cannot fail to be impressed that it sometimes seems to right up the health in a very satisfactory manner. On the other hand, it is true that the effects of remittent fever, when very severe, are often quite the reverse; giving a severe shock to the vitality of the system, and bringing on some chronic derangement which, though not of itself dangerous, serves as a favoring condition for the development of some other disease of a more fatal character.

The action of malaria on the system being influenced by inherited and acquired peculiarities, and modifying in its turn, usually for evil, the course of other diseases, or following them up with a long train of evils, and sometimes seeming to act as a therapeutic eliminator of occult morbid conditions, and to the exclusion of some other diseases (of which more anon), these considerations though stated in general terms make plain what an intricate problem it is to ascertain with tolerable certainty the exact influence of this mystic agent on longevity. As an etiological cause it may very properly be considered as an addition in certain localities to all the causes of disease existing elsewhere, for it does not seem to displace any one of them, whatever may be thought of its modifying power in any other respect. Were we in possession of vital statistics recorded with the special view of ascertaining what the influence of this superadded cause of disease is upon health, as in a few contiguous non-malarious, and a few malarious counties, a very accurate estimate of its power over life might be made. But as nothing of the kind has been attempted, the solution of the problem is attended with peculiar difficulties, and will account for the line of research I have been compelled to adopt.

It would be unnecessary in this connection to dwell upon the vexed question of the origin of intermittent and remittent fevers did not the conception of their causation largely influence the mind in the formation of its conclusions, as to the effects. To one who has his mind made up that these fevers are due to a gaseous poison, or to certain disease-producing germs, the conception of evil effects, and of their persistence, would be much more likely to prevail, than to one who regards their production as due simply to certain endemic climatic conditions. In other words, he who believes that the atmosphere of certain places is charged with

a substance highly and constantly inimical to life, will be more likely to regard it as very unfavorable to longevity, than he who believes that there is no such substance, but that the alleged effects are solely due to the local variations of a perfectly natural force, which only disturbs for the time the healthy play of the functions. In the former case, there is supposed to be, as in the imbiber of alcohol, or the eater of opium, an unnatural material in the body, producing abnormal results, as in the so-called malarial cachexia, and which under no circumstances can be supposed to affect life other than in a detrimental manner, even when those subject to it are apparently in good health. With a poison of this kind in the systems of all the inhabitants of a malarious region there may be supposed to be a suspension, but not an immunity to its influence. Like the influence of all other poisons the untoward effects will be shown sometime in life, and in a manner highly unfavorable to health and longevity. The enormous influence of a free use of alcoholic drinks in shortening the expectation of life is well known, and why not also malaria, which is the alleged cause of so much disease? From this point of view it must be acknowledged that the prospects of long life in a malarious region are decidedly dark; there being supposed to be a more or less constant imbibition of a poison as constantly inimical to health and life.

On the other hand, if the cause of these fevers consists in certain local climatic conditions to which there is not constitutional adaptation, and to which the strength of the body sometimes affords insufficient resistance, the unfavorable influence upon life would more likely be regarded to be nearly as transient as the operation of the conditions. It would then be like an irregular, but great variability of climate, affecting the weakly and the unadapted only for the time in a manner unfavorable to longevity. When fairly over the transient effects, the subjects of one kind of climatic variation, like those of another, may be supposed to have nearly as good chances of prolonged life as those differently circumstanced. At the most, the evil effects would only be when the vital force of the body was lowered by some cause, rendering it subject to exterior changes, above which it rose when in a normal condition.

Proof of the exact influence of malaria on the duration of life being unattainable, it necessarily arises that the opinions thereon will be very much influenced by what is supposed to be the nature of its cause; whether it is an entity or a condition. As the object here is first of all the promotion of truth; and second, to aid in the formation of a correct opinion on the subject involved in the title, I shall be compelled to state in as brief terms as possible what seems to be the true nature of the malaria which is usually assumed to be the cause of periodic fevers.

While not questioning the accuracy of the observation that the decomposition of large quantities of vegetal or animal matter on a limited space is productive of disease, I do question that such decomposition has a definite relation in time, in quantity and in invariability of sequence to the prevalence of periodic fevers. And, at the onset I may be allowed to claim a desire to avoid a narrow special pleading statement of facts and observations, which, while accounting in a satisfactory manner for the prevalence of fever in one region, wholly fails when applied to another. The tacit ignoring of the facts pertaining to one region not in harmony with the preconceived notions, and the undue prominence given to those which do, is worse than the mere zeal of a partisan: it is disloyalty to science and to truth.

Assuming that the specific cause of periodic fevers arises from some product of vegetal decomposition, the effect ought to exhibit an invariable relation to the cause—no adequate counteracting influence being shown. Those well acquainted with all the recorded facts on this subject know that there is no such invariability of relation. In the Mississippi Valley the greatest annual prevalence of fever corresponds with the maturation, not with the destruction of vegetal matter. The greatest destruction is during the winter and spring months, or when the entire outcrop of the previous season disappears. Comparing the amount of summer growth and decomposition in Brazil with that of the foot-hills of California, the difference well nigh expresses the greatest possible extreme of these processes. In the latter locality from May till November of each year the drouth is so extreme that the grass of winter preserves all the properties of sweet, nutritious hay; while in Brazil the abounding moisture, tropical sun, and luxuriant vegetation present conditions extremely favorable to a rapid decomposition, as well as to a profuse growth of every kind of vegetal matter; yet periodic fevers are quite rare in Brazil, while along the foot-hills of California they are extremely rife. The most obstinate intermittents I ever met with occurred in that part of the Golden State. A number of persons whose names I can recall, who emigrated to California from the fertile plains of Ohio, like myself, became subject for the first time to intermittent fever of a very persistent form—in some instances producing great enlargement of the spleen. Blodget, in his Climatology of the United States, in noticing this statement of mine, which first appeared in the *New York Journal of Medicine and the Collateral Sciences*, March, 1854, doubted the accuracy of the diagnosis on account of the fact that all the conditions favorable for the generation of malaria are absent to an extraordinary degree. The air of that region does seem to indicate an unusual absence of the conditions which favor septicity, or of atmospheric agents destructive to organic structures. A quarter of fresh beef is preserved for use by simply hanging it on the limb of a tree; there it desiccates, but never putrefies, The statistics of the United States Army, as well as the published statements of many other later writers, abundantly vindicate the accuracy of the diagnosis referred to. At every military post of that State, away from the coast, periodic fevers, according to the army returns, constitute the main disease. Camp Far West was so insalubrious in this respect that it had to be abandoned.

Ferguson records of the British army in Spain during the Peninsular war, while encamped on the barren and sandy plains of that country, that the troops suffered to an unusual degree from periodic fevers. Difficult as the *presence* of so much fever was to account for on the malarious hypothesis, it is not more so than to account for its *absence* in the most fertile portions of the Sandwich Islands. Here, there is no need to search for water nor for vegetal matter as in that of which Ferguson wrote; both abound, with a tropical sun and yet no malaria, if the absence of periodic fevers be accepted as evidence. Other examples equally conclusive of the absence to an almost total degree of the assumed cause, and the presence to a virulent degree of the assumed effect, and of the abundant presence of the assumed cause, and the almost complete absence of the effect, might be narrated, but these must suffice for the present purpose. They are quite sufficient to satisfy an unbiased mind that when the range of our mental vision is extended beyond the limits of a county or State, the theory

which may serve to account for the presence or absence of intermittent fever in one locality may wholly fail to do so in another; and that when such is the case, when there is no invariability in the succession of an assumed antecedent to an assumed consequent, their occasional conjunction must be regarded not as causative but accidental.

A theory of the cause of periodic fevers, to be worthy of credence, requires to be competent for the explanation of the phenomena everywhere—in Ohio, in South America, or in Africa; as well as to account for all counteracting and modifying circumstances. Such a theory—one that seems to meet all the requirements of logical sequence, not simply here or there, but in all countries—is laid down at length in the *Transactions of the American Medical Association* for 1864. Continued observation since that time, in a region where this type of fever annually prevails, has only served to establish to my mind its claims as the true one; and the same opinion has been expressed to me by a score of leading medical gentlemen in this and other States, whose judgment and opportunities for its verification are entitled to the highest respect. This theory is as follows: *With a mean summer heat of* 60° *and upwards, the greater the regular diurnal oscillations of temperature, the greater, ceteris paribus, is the prevalence of periodic fevers, and with the rise of the mean is the increase of susceptibility to fluctuations, or the smaller comparatively the regular oscillations requisite to produce the morbid phenomena, and the more intense their character.*

A condition which has a marked influence on the operation of this law of production is the prevailing degree of atmospheric humidity. When this is great, the characteristic effects of diurnal fluctuations of temperature are in accordance with what familiar observation has taught of other vicissitudes, much more likely to arise, as well as to present a much graver character.

A collection of statistics, gathered mainly from the meteorological and sick reports of the United States Army for 1839–54, and 1855–59, in every section of the Union, is adduced in the Transactions above referred to, to prove the uniformity of the relation of the alternations between the temperature of day and night, when great, to the prevalence of periodic fevers. Without going into details suffice it to say, that no exception to the law has come under my notice; and that when the modifying influences above referred to are kept in mind, the relation of the cause to the effect is, as all real causes, are perfectly uniform.

Those in the habit of noting the vicissitudes of atmospheric heat, are well aware that they are of two kinds; the irregular sweeping changes of the weather, and the regular, from surface diurnal absorption and nocturnal radiation. The one is more or less general, the other local. The character of the soil, the altitude, the humidity and immobility of the atmosphere, and the cloudiness of the sky, influence to a remarkable degree these local fluctuations of the thermometer, and with which we have here alone to do. They are also well known to be, nearly everywhere in the northern hemisphere, much greater during the autumnal months than during any other portion of the year. They are also greater in low than in high localities, over a loose organic soil than over a dry clayey surface. The plain, having the heaviest dews and the most severe untimely frosts, attests in a general way the correctness of these observations.

A very wet cloudy summer season by hindering diurnal absorption and nocturnal radiation reduces local oscillations to a minimum, and the relation of such a season to salubrity, at least so far as periodic fever is concerned, is well known to the resident physicians of the so-called malarious districts.

The rural physician, in his midnight rides, during the summer season, is made aware of the great influence of local conditions in depressing the temperature. In the low damp valleys the atmosphere is very chilling, on the adjacent hills it is much warmer and dryer, while under the foliage of a lofty forest the nocturnal warmth reaches its maximum, and is peculiarly grateful. I have found by experiment that on still nights the depression of the temperature of the air decreases about 8° to an altitude of fifteen feet. The bearing of these differences on the production of periodic fevers is obvious. Such fevers, other things being equal, are always more prevalent in valleys than on the adjacent hills, and persons whose night quarters are on the lower floor of a house are more likely to suffer than those in the rooms above.

The foliage of trees has been supposed, from the protection it affords to the invasion of fever, to absorb malaria. The theory of regular diurnal oscillations explains this protection on a more rational mode than by a double hypothesis, or the supposed absorption of a supposed existence. A dense foliage equalizes the temperature of the day and night, hindering absorption during the one, and radiation during the other. A little observation of the thermometer at sunrise in such a place, or the mere fact of the absence of dew, will soon convince any one of the equalizing power of an overshadowing foliage. The following facts were related to me by an intelligent pioneer of the Muskingum Valley. One of his neighbors, a Mr. B., from some whim preserved the indigenous trees over an area of an acre or more around his dwelling. It was a matter of common talk, that while all his neighbors suffered annually to a greater or less degree from autumnal fevers, Mr. B. and his family escaped. By and by he was gathered to his fathers, and his sons, desirous of having their home look more like those of the neighborhood, cut down all the primitive forest trees, and planted some low evergreens in their place. From that time the exemption of the family from autumnal fevers ceased.

A considerable body of water diminishes the diurnal oscillations of temperature on the adjacent lands to a marked degree. Water absorbs and radiates heat much more slowly than land; hence it acts as an equalizer of the local atmospheric temperature, and in this way preserves the inhabitants favorably located to feel its influence against great diurnal vicissitudes. Writers on malaria uniformly mention the fact that a river often seems to serve as an effectual barrier to the passage of malaria, and that on the worst fever-generating coasts to anchor a vessel a few hundred yards from the shore protects the occupants of the vessel from a febrile invasion.

On the Sandwich Islands and over a large portion of Brazil, the regular diurnal fluctations of heat very seldom exceed 10°, and the mean only about 5°, consequently periodic fevers are quite rare. On the other hand, in the interior of California, the diurnal fluctuations often reach 40°, with a high mean temperature, and were it not for the extreme aridity the periodic fevers which result would be of extraordinary virulence. As it is, such fevers are remarkably prevalent and obstinate, a prevalence so difficult to account for on the malarious hypothesis that some writers have attributed them to the alkalinity of the soil.

At this place, on yesterday, the 1st day of July, the thermometer from nocturnal radiation stood at 6 A.M. at 56°, and at 3 P.M. at 89°. This is no unusual fluc-

tuation, and it only remains to add that periodic fever is the prevailing disease.

On this theory can readily be explained the danger of exposure to night air, and of sleeping apartments near the ground; of the greater prevalence of such fevers during the autumnal months; of the strictly local action in some places of the cause; of the protection afforded by water, the foliage of trees; why compactly built cities in the midst of a malarious region afford comparative immunity; why exposure to night air and morning fogs favor the development of ague, and why certain precautions in bracing the system and protecting it by appropriate clothing secure to an eminent degree exemption, in even the most noted of the malarious districts. Dr. Jones, the President of the Ohio State Medical Society, at its session in June last, in an address, related that a young physician, surprised at the hale, hearty appearance of an old physician of the Maumee Valley, the inhabitants of which are known to be much subject to periodic fevers, inquired by what means he succeeded in keeping himself in such an admirable state of health, "Oh!" said he, "a flannel shirt did it all."

Whenever great nocturnal depressions of temperature regularly prevail there is an alternate activity and excitement of the cutaneous functions, and then of a sluggish, depressed action—with corresponding irregularities in the action of the liver, kidneys, and intestinal secretions. An attack of ague is only an intensified repetition of these phenomena, so rapid in occurrence, and so severe in degree as to constitute disease. First, the alternate excitement and depression becoming too great for physiological resistance, it becomes morbid—just as delirium ebriosum is liable to become delirium tremens; then secondary effects ensue from such extreme irregularity of function, denoting that the functions of all the digestive organs have become seriously impaired. The periodical repetition of a great irregularity of function from a like cause is often seen under other circumstances, as in periodical hemicrania or sun pain. This is a winter or early spring disease even more distinctively than ague is an autumnal disease. The cause, though similar, is different, its application being local and artificial. During intensely cold weather the brow is exposed to a very low temperature, while during the night it is sometimes exposed to temperature artificially high. Continual repetition of this will often beget brow or local ague, precisely as a general repetition of severe alternations often begets general or systematic ague.

It is obvious that, if this doctrine be accepted as true, it must affect very materially the conceptions of the chances of an ultimate recovery from the direct morbid effects, as well as of the more remote sequelæ. There is, according to this theory, no continued impregnation of the system by a poison, only a temporary disturbance of healthy function by the excessive alternations of a normal force. The anæmia, the disordered functional action of the liver, the enlargement of the spleen, the irregular and debilitated digestion, are only consequences of an exterior disturbing force; not of a saturating, lurking poison. There is only a functional derangement to correct, and the removal of the depraved secretions which thereby ensue from the body as the main condition for the complete establishment of health.

It is well known that the sudden exposure of the body to a low temperature is attended with dangerous consequences, in the main, in proportion as it is previously exhausted by a high heat. This is pointedly true in the case of exposure to diurnal oscillations. In Ohio, where the mean of summer heat rises only to about 70°—the effects of such alternations are less serious than where the summer mean rises to 80°, as in Florida. A rise of 10° of the mean heat is more than equal in effects to that of an addition of 10° to the mean of the diurnal oscillations. Especially is this true of the unacclimated; the effects are then so intense that they not unfrequently prove immediately fatal. Accordingly, other things being equal, as the mean heat rises so does the fatality of intermittent and remittent fevers increase. In a general way, this is very clearly shown by the mortality from these fevers in the following States, as reckoned from the last United States census, of deaths from all causes:

State.	Percentage of deaths from Intermittent and Remittent Fevers.
Alabama	7.0
Arkansas	7.0
California	1.0
Florida	9.4
Georgia	5.1
Kentucky	3.0
Louisiana	5.7
Minnesota	0.4
Missouri	3.8
Mississippi	6.8
Wisconsin	0.5
Ohio	1.2
Pennsylvania	0.9
Michigan	2.2
Indiana	2.3
Illinois	2.6
Kansas	5.2

While this table is undoubtedly approximately correct as to the loss of life immediately arising from periodic fevers in the several States as a whole, it colors the loss too highly in some regions, and too faintly in others. Over all the southeast part of Ohio, from near the centre of the State, periodic fevers are quite rare, while over the northwest part they are decidedly prevalent. At this place, which is just within the so-called malarious region, and at Toledo, —the only places of which I have reliable statistics,— the percentage of deaths from periodic fevers is nearly two per cent.

The number of deaths from these fevers, while correctly indicating their severity, by no means correctly indicates the degree of their prevalence. It is well known that some epidemics of scarlet fever, diphtheria, dysentery, etc., are very fatal,—and others, as justly entitled to the term epidemic, are very rarely so. Just so is it with those endemic fevers. In one locality they are quite fatal, while in another, the cases, though quite as numerous, are rarely fatal. Other things being equal, the higher the mean summer heat the more fatal will attacks of periodical fever be likely to prove. Moreover, experience has amply shown that in localities where the mean range of summer heat is only about 70°, adaptation to the environment is possible—but when, as in India, or in the West Indies, it ranges about 80° and upwards, such a thing as acclimation never occurs. (Aitken.)

In Indiana, all over the valley of the Wabash, autumnal fevers prevail to a greater extent than in any other portion of the State. In California, the coast region is comparatively exempt, while on the Sacramento and American valleys they are very prevalent (*vide* Medical Statistics United States Army 1839–54, and 1855–60; also Dr. Hatch in *N. Y. Jour-*

nal of Medicine and Collateral Sciences, July, 1854). In Illinois, periodical fevers prevail with considerable uniformity all over the State. Their grade, however, is decidedly more severe in the southern portion, and their prevalence if anything somewhat greater. In Kansas, according to Dr. Beeman (*Transactions Ohio State Med. Society*, 1870), the greatest prevalence of periodic fever is in the southeast of the State. In accordance with the table above given, he records, from personal observation, that intermittent and remittent fevers are more rife and severe there than in any portion of Ohio. But he is at a loss to account for it, as "the natural drainage of the country is among the best in the world: there are no swamps or marshes; the streams have deep, narrow channels and rapid torrents, they seldom overflow their banks; nearly all the streams have rocky bottoms; there is no stagnant water; the atmosphere is in constant and much of the time violent motion. It surely is not produced by undrained marshes, for there are none in the country. But a comparatively small part of the vegetation that grows upon the prairies is destroyed in the ordinary mode of decomposition, by far the greater portion being consumed by fire" (page 73). He then endeavors to show that the prevalence of these fevers is due to the enormous quantity of carbonic acid liberated by prairie fires—forgetting apparently the dissipating power of the strong winds, to say nothing of the atmospheric commotion produced by the fire itself. The real explanation may be found in the fact that at Fort Scott, a military post of that section, the mean diurnal oscillations for summer months, from observations made as late as 7 A.M. for the night, and 2 P.M. for the day, is 20°; the mean heat of same period being 72°.

In reference to deaths directly due to periodic fevers age has an important influence. According to the United States census, thirty-four per cent. of those dying by these fevers are under five years of age, and sixty-two per cent. under twenty years. Dr. Jones, of Toledo, writes that nearly fifty per cent. of those dying at that place of intermittent and remittent fevers are under their fifth year. Among adults the proclivity to periodic fevers does not seem to be much influenced by age. The prevailing opinion, however, seems to be, that, if anything, susceptibility decreases with advancing years.

Taking into account the early age at which the greater number die from the direct effects of the fevers in question, the influence of malaria on the duration of adult life must be estimated at a very low rate. And this corresponds with the answers received on this head from experienced practitioners in the so-called malarious districts. Dr. Patton, of the Wabash Valley, Indiana, a region famed for its periodic fevers, says, "Malaria does not shorten the duration of life to any great extent." Dr. Cutting, of the same region, says, "I think as a rule malaria shortens life but little." Dr. Russel, of Mount Vernon, Ohio, an old and highly reputable gentleman, says, "Intermittent and remittent fevers influence the duration of life very little." Dr. David Prince, of Illinois, says, "Without knowing the statistics I have the impression that we have as many old people in proportion to the population as in any other part of the world." Dr. Beach, of Madison County, Ohio, says, "Have no doubt that the average duration of life is materially lessened by this cause, but to what extent can form no definite opinion." Dr. Fitch, of Logansport, Indiana, reports, "that including all ages from infancy, the average duration of life is lessened by periodic fevers in the years when it most prevails." Dr. Jones, of Toledo, says, "That climatic influences exercise a vast influence upon longevity all over the world, must be conceded, and more in America than in Europe, though if there was no so-called malarial disease in this country, I believe there would be nearly as many deaths, as the causes of malaria are the causes of nearly all diseases arising from the so-called 'colds.'"

A little more than a quarter of a century ago, many medical men held the opinion that the prevalence of malarial disease was antagonistic to that of phthisis. Time and a more enlarged observation has shown this opinion not only to be without foundation, but, on the contrary, that the deterioration of health wrought by this agency rather favors, if anything, the development of the disease. The statistics of deaths from consumption in this place for four years show a mortality of 18 per cent. to the deaths from all the causes, one per cent. higher than for the State at large.

Personal observation in the treatment of disease for a number of years in a locality where periodic fevers are quite rare, and then in a region where they constitute the prevailing disease, has convinced me that the influence of these diseases is prophylactic to that of some others of a more fatal character. In particular have I observed the infrequency of typhoid fever on the level plains of this State—a disease which constitutes the bane and the dread of the residents of the hilly region of Eastern Ohio. The same thing has been noted and expressed to me in many instances by non-professional persons who have removed from the latter to the former. In this place, with a population of about ten thousand, the mortuary returns for the past two years show but one death from typhoid fever; and the only case I have seen within the same period inside of the corporate limits was that of a young man who came here sick with the disease from Wheeling, Virginia. Dr. Patton and Dr. Fitch, of the Wabash Valley, report that typhoid fever is not a prevalent disease in their region, and that it may be the malarial poison antagonizes that of typhoid fever. On the other hand, it is but fair to say that other medical gentlemen of repute do not think periodic fevers exercise any prophylactic influence over the prevalence of typhoid; though, so far as my knowledge extends, they have not attempted a comparison with any region where the former does not prevail.

For obvious reasons, a comparison of the relative prevalence of typhoid in the so-called malarious and non-malarious regions, should not extend to compactly built cities; as it is well known that such civic conditions exclude periodic fevers, and serve to disseminate the typhoid miasm through numerous sewers.

Periodic fevers exercise a well-known influence in the development of some remote chronic disorders, and thus act in a manner more or less unfavorable to the prolongation of life. The effects upon the health very clearly indicate the organs upon which the weight of the derangement falls. These are the organs instrumental in the elaboration of blood. The liver, stomach, spleen and intestinal canal suffer the most; exhibiting, first, marked functional derangements which, if long continued, are likely to result in serious structural changes. Frequent attacks of extreme digestive languor; of a liver and intestinal canal acting with extreme irregularity,—now apparently entirely torpid for days together, then ejecting excretory matters with acute activity,—are very sure to result in the production of anæmia, of jaundice, of debility, and more remotely of enlarged spleen and liver, or of hepatic abscess or dropsy, and more rarely of Bright's disease. Sympathetic functional derangements of the heart are also very common, such as pal-

pitation and an interference with its normal rhythm, yet in persons of fair constitution, and not far advanced in life, nearly all these derangements are remarkably amenable to treatment. Take albuminuria as an example: it is not one of the common sequelæ of periodic fevers, yet the few fully-developed cases I have seen were of this origin, and all recovered.

The result is likely to be very different in those broken down by intemperance, or by other forms of dissipation, or in those very feebly constituted or well advanced in years. It is, however, uncommon to see in this region any of these diseases in old persons, as the sequelæ of periodic fevers, perhaps for the reason that the most of those well advanced in years have gone through the process of acclimatization. In the great majority of instances this is accomplished during the first few years of residence. After repeated attacks the health is usually fully restored, and another seizure may not occur during a residence of forty years.

Personal observation, and the evidence furnished by a very limited collection of statistics, has convinced me that of the causes of deaths arising from the more remote effects of periodic fevers, dropsy furnishes the largest number. The oft-repeated and severe alternation of function to which the liver is subject, and the anæmia arising from this and correlated conditions, favor to an eminent degree the development of ascites. In this place it causes three per cent. of the deaths; and this, too, almost exclusively among adults.

Deaths from uncomplicated diarrhœa in this region, except among children, is of very infrequent occurrence. I am unable to call to mind a single instance of it, except in those who had contracted the disease in the army during the late war of the rebellion.

It is the opinion of some, and I think on good grounds, that periodic influences sometimes affect unfavorably the course of other diseases. Take pneumonia as an example: when this complication exists to a considerable degree, there is a greater tendency than usual to sudden congestions during the inception as well as during the progress of the disease. Pneumonitis, under such circumstances, becomes peculiarly dangerous to life, and no doubt adds to its fatality, but to what extent it is not possible, in the absence of needful data for comparison, to say. A well-marked complication of this kind is not, however, so far as my observation extends, of frequent occurrence. When it does happen, it is usually only in those who have recently suffered by an attack of periodical fever, and who have not fully recovered from its effects.

From all this it appears that the weight of testimony is altogether against the view of malaria, throughout this region, at least, affecting the prolongation of life unfavorably to any great extent; and, moreover, the statistics bearing upon this unfavorable influence show that it is more potent during infancy than any other period of life.

In reference to the influence of the sequelæ of periodic fevers upon longevity, their importance, though decided, should not be overrated. Their hurtful tendencies upon organic life, when severe, prolonged and oft-repeated, are unquestionable. Yet, even then, with youth, correct habits, and judicious treatment, every apparent vestige of these effects will vanish, and the subject never afterwards exhibit a trace of them in a long life, not even in the mode of dying. The result will be likely to prove different in those of frail constitution, past middle life, or in those predisposed to pulmonary consumption. Recuperative power is then lacking, and the prostrating effects may be apparent for years. The signs by which this state of the system is denoted are important: a pale, dingy-colored face, thin or flabby flesh, tongue paler than natural and never wholly free from coating, abdomen usually tumid, urine charged with bile, appetite capricious, and the action of the bowels irregular. Such results, arising from prolonged attacks of periodical fever, are, however, comparatively rare or exceptional in this region. When they do occur, and under the conditions above specified, a life-risk should be deemed hazardous.

Aside from these effects, as the result of long-continued and profound functional derangement, the so-called malarial influence does not seem to exercise any pernicious influence upon life. The supposition that there may be in it an occult power in bringing on other diseases of a dangerous character, either of the lungs, liver, or bowels, without manifesting or ever having manifested itself in its characteristic way, viz., by a well marked periodicity of the morbid symptoms, does not appear to rest upon any other than hypothetical considerations. On the hypothesis that the so-called malaria is a poison, an entity, not a condition, it may be supposed to play a part in nearly all the diseases of the Mississippi Valley. Of the truth or falsity of this assumption there is a test which may well be termed an *experimentum crucis*. On all forms of malarial influence, or more properly on all kinds of periodical disorders, the administration of quinine acts in the happiest manner in the removal of the morbid symptoms. When its therapeutical influence is not decided, or when its proper and timely administration does not immediately arrest a disorder, save in cases of exceptional severity, it may be safely affirmed that the cause is not malarious. The production of a perceptible toning effect is not sufficient evidence of that condition, for this may be seen in the enfeebling stage of any disease everywhere. There must be an immediate and remarkable impression on the violence, if not a total arrest, of the malady for which it is given. The narration in a few words of two typical instances may make the distinction plainer. A wholesale merchant, of fair constitution, though pale and liable to glandular irritation of the fauces, was suddenly taken with sore-throat and a large glandular swelling under the left ear. The swelling of the sub-maxillary glands was great, and after endeavoring to dissipate it two or three times with iodine, with apparent success, the enlargement would obstinately reappear, and on each reappearance looked worse than ever; so that suppuration at last seemed inevitable. With this view poultices were ordered, resolution again occurred, and recovery seemed as complete as it had been two or three times before, but again the swelling returned. The friends attributed the reappearance to exposure, but I at last discovered that the intumescence made its appearance at regular intervals on every third day. Quinine was immediately prescribed, and the disease disappeared as if by magic, permanently. A middle-aged man, who had frequently suffered with ague, was taken during the winter season with a decided chill. He immediately procured quinine, thinking it an ague, and as soon as he felt a little better took twelve grains in appropriate doses. On the day succeeding he was worse than ever. Examination revealed his ailment to be organic, which was promptly removed by appropriate treatment of another kind. There is scarcely a week in which I do not meet with similar cases, some one who has been taking quinine for days on his own responsibility, thinking he has an ague, without benefit, nay with injury.

In this way experience reiteratingly inculcates that unless a disease manifests periodicity, the so-called malaria in the system has no more to do with its existence in the Mississippi Valley than with the existence of a like disease on the Grampian Hills.

In attributing so little importance to malaria upon longevity, there may appear to those not practically familiar with all the facts in the case, a staggering inconsistency. How is it that a form of disorder can be so common as to be termed the prevailing disease, and yet not prove highly inimical to life? To my mind there can be but one answer to the question, and that is—not that there is any antagonism of the cause of periodic fevers to other diseases, but that the eliminative struggles of nature in an attack of this fever result in correcting some latent derangement and expelling some latent product from the body, which, if not thus got rid of, would continue to augment and at last culminate in some form of disease far more dangerous to life.

MORTALITY AT SEA IN 1873.*

THE return relative to the deaths of seamen in the British Merchant Service during the year 1873 has just been issued. It applies to the 202,239 seamen in British registered ships of the United Kingdom, exclusive of river steamers, so far as their deaths take place out of the United Kingdom, so that it does not include passengers nor masters, nor those who are landed at home in a dying state or return from sea. Therefore, as regards disease, this return does not enable any reliable comparison to be made with the mortality in any other section of the population. This will be evident when we state that whereas the death-rate from disease under medical care in the Royal Navy in 1872 was 6.05 per 1000, that registered in the mercantile marine out of the United Kingdom, without medical aid, is only 8.41 per 1000; the fact being that under the continuous service system in the Queen's service sick and dying men are, on arrival in England, discharged to the naval hospitals and their deaths included in the mortality returns. We have, then, no hesitation in affirming that the death-rate from disease amongst merchant seamen is probably double that which appears on the face of these returns. We must also raise our voice against the delusion that any reliance can be placed upon the forty subdivisions of diseases under which these fatalities are grouped, so long as the diagnosis is in each case determined by the mate or the master of the ship, without any subsequent medical inquiry into the symptoms and treatment on which that determination is based. The fact of death is only known at all because the Board of Trade, with commendable care, administers to the wages and clothes of deceased seamen; and the Board is concerned alone with the fact, not with the cause of death. It is a pity that the return does not confine itself to fact, as the guesses made by mates and masters about the disease are utterly illusory.

No such observation obtains as to the violent death-rate, as mortality from accidents is not so largely affected by its ultimation occurring within the United Kingdom, and so being excluded from the return. We may fairly assume that most of the deaths by accident, being of a sudden character, are likely to result on the high seas where the occurrence takes place, and will therefore appear in this return. As no medical inquiry ascertains the cause of such deaths as are supposed to result from disease, so no legal investigation by coroner or otherwise follows upon suspicious or sudden deaths at sea. During twenty years no person has been put on his trial for causing a death at sea otherwise than by red-handed murder. But if murder may be inquired into and punished, why not manslaughter, negligence, carelessness, and other preventable causes? Mark the effect of the absence of all inquiry in deaths by violence in 1873—a year when a Royal Commission was sitting, the Board of Trade being badgered on all sides, and Mr. Plimsoll appealing to popular indignation. In that year 1000 *more* seamen were drowned than in the preceding one, though 1481 *less* men were employed; 17.58 merchant seamen per 1000 were killed or drowned for every landsman per 1000 in the home population killed by accident, or for every 2½ men-of-war's men per 1000. For every merchant seaman who died by disease out of the United Kingdom two others were drowned. Had the death-rate per 1000 of the Royal Navy in 1872 obtained in the mercantile marine last year, 2231 men drowned by shipwreck, 794 of those who were washed overboard or otherwise drowned, and 75 of those who were killed by other accidents, out of a total "accidental" death-list of 3554, would have been now alive. Instead of a total mortality of 5393 men, or 26.67 per 1000, we should have had only 1717 deaths, or 8.5 per 1000, and this notwithstanding that the former rate does not include mortality after arrival and discharge in the United Kingdom, whilst the latter does include it.

With whatever this violent death-rate be compared, it shows a vast waste of human life. That a great deal of this vital waste is quite beyond the natural risks of the sea, and is easily preventable, seems, in the absence of any legal inquiry, to be a reasonable conjecture. Before anything can be done to stop this vast accession of drownings, a coroner must inquire, in each individual case, according to the old sea law, "whoe killed him, and unto whome the ship did belong." In the face of the following table, may we not ask, "Is there not a cause" for such inquiry?

MORTALITY OF THE BRITISH MERCHANT SERVICE OUT OF THE UNITED KINGDOM.

Supposed Cause of Death. (202,239 men employed.)	As it was in 1873.		As it would have been if same ratio as Royal Navy in 1872.	
	No.	Ratio per 1000 men.	No.	Ratio per 1000 men-of-war's men.
Disease and natural causes..	1653	8.17	1223	6.05*
Drowned by shipwreck.....	2231	11.04	——	——
Drowned otherwise.....	1032	5.10	238	1.18
Other accidents.....	291	1.44	222	1.1†
Murder and homicide.....	5	.024	4	.02
Suicide.....	41	.203	30	.15
Unknown causes.....	140	.693	——	——
Total for legal inquiry....	3740	18.5	494	2.45
Mortality out of Unit. Kingd.	5393	26.67	1717	8.5

"THE MEDICAL RECORD is disposed to find fault with the Southern Life Insurance Convention at Bath Alum, for only partially adopting the report of the Committee on Medical Blanks and Examiners. Under the caption of "Half-way Measures," it complains of failure to improve the opportunity for the accomplish-

* From "The Lancet" of May, 1874.

* Including deaths in the United Kingdom.
† Including gun exercise and action.

ment of the more important reforms in the medical department which are so clearly indicated in the report. It arraigns the members of the convention, because, as it asserts, "it was voted not to lay the axe to the root of the present unsafe and demoralizing system of appointing examiners, but simply to surround it by one or two additional safeguards. The falling of the old tree might stir up a rebellious spirit among the agents of the old régime, and the officers of the various companies hardly cared to face this disturbance in the camp."

As it was purposely to face such "disturbances," and all other disturbing elements, that the gentlemen composing the convention assembled together, such an allegation or such an intimation of want of pluck is altogether unfair and unjust. The assemblage was convened rather for preliminary consultation, having in view a permanent organization, and for deliberate and well considered action, not for hasty measures at the outset, and certainly not for "half-way" measures in the end. The action complained of was merely temporary, no one concerned having an idea that anything beyond partial acceptance of the report was desirable or practicable in the absence of the fuller and more extended facts and particulars which, it was expected, would be furnished in the future. Besides, there were but two medical representatives in attendance, and it was but fair to the non-represented companies that their voice should be heard before the final adjustment of such delicate and all-important questions. The first three sections of the report were not, in effect, or in point of fact, rejected; they were simply postponed for further report, and for more intelligent action than the members at the start were prepared to bestow.

It is also complained that the committee did not "improve the opportunity at their command to present to the convention for study, amendment, and eventual adoption, a uniform list of questions for the medical examiner to answer," the RECORD adding the remark, which nobody will deny, that "it is a source of considerable annoyance to a physician who examines for several companies to fill in correctly so many different forms of blanks, and, on the other hand, there is no good reason why the companies should not all make use of the same style of blank." This is so palpably true that the members of the convention interchanged their blanks for future comparison, and with a view to that eventual assimilation and uniformity which is so desirable. If the RECORD, or if any medical authority will indicate, in advance of their action, a form of blank so manifestly clear, simple, comprehensive, and beyond criticism that all can promptly agree upon it, that action will be materially hastened. In northern and western companies the best forms of questioning by the examiner have found imitators and copyists, but no general movement, even in the Chamber of Life Insurance, has yet been made for the adoption of a common, uniform list of questions.—*Baltimore Underwriter.*

Miscellaneous.

"DIRECTIONS FOR THE EXAMINATION OF URINE."—Prof. Austin Flint, jr., of this city, has recently published an excellent little pamphlet entitled "Directions for the Examination of Urine of Applicants for Life-Insurance." Although the book was written expressly for those who make examinations for life-insurance companies it is one that very many practitioners will be glad to keep upon their office table. It contains in a nutshell all that is essential to a proper knowledge of these chemical manipulations.

While we can hardly agree with those who advocate the practice of examining the urine of every applicant for life-insurance, we certainly think that the companies would avoid not a few bad risks were they to insist upon such an examination in the case of all applicants who have reached their fiftieth, or perhaps even their forty-fifth year.

If we are correctly informed, it has been for some time past the custom with one of the New England life insurance companies to require an examination of the urine in quite a large proportion of the applicants for policies. It would be very interesting to know how successful they have been in carrying out the plan, and what have been the real difficulties in the way of its accomplishment.

INCREASE OF INSANITY IN ENGLAND.—In a very interesting paper on this subject, T. Harrington Tuke, the President of the Psychological Association, makes the following statements: In the recent report of the Commissioners of Lunacy, tending to show that a great wave of insanity is slowly advancing, various reasons have been suggested to explain this increase, among which the following are worthy of mention:

It has been assumed that the congregation of large bodies of workmen in towns and cities, the confinement arising from the nature of their toil, and the restriction of their space have given us a degenerate population, subject to mental disease. But this is not altogether so. Such causes would induce idiocy in children and diminish the average duration of human life, but would not necessarily induce insanity in men of mature years. Moreover, it is by no means certain that the inhabitants of the crowded city are more prone to mental disorders than the inhabitants of agricultural districts.

The emigration of the adult population, which has been steadily increasing during the last half century, may also have had some influence upon these returns, but it cannot be a great one. If emigration takes to other and kindred shores some of the finest of our peasantry, the best of our workmen, it also fortunately tempts the unstable, the enthusiastic, the adventurous, the disappointed who, perhaps, remaining here, fretful and despairing, would have swollen the number of insane.

The hypothesis has been advanced that the progress of civilization and the spread of education among the masses have, with a greater activity of brain, produced a corresponding increase of nervous exhaustion and disease. This is a melancholy theory; it would unsettle our belief in the onward progress of mankind; it would shake the very foundation of our faith. Such a theory receives no support from statistics. If intellectual training and mental exertion were causes of insanity, then it should be more frequent in those ranks in which, during the last half century, the mental powers have been so much more cultivated and exercised. The statistics of lunacy show, on the contrary, that the increase of insanity has been amongst the poorer classes only. This increase has been notably great during the last two years. I fear the explanation is to be found in higher wages, and the consequent means of undue indulgence. But there is another aspect to this view. It may be that the inexorable laws of supply and demand, while giving more than due wages to some of the working class, plunge others into dire distress, which in time saps their strength, both physically and mentally, and ultimately makes them denizens of the madhouse.—*Baltimore Underwriter.*

Original Lectures.

FISTULA IN ANO.

A CLINICAL LECTURE

BY ERSKINE MASON, M.D.,

ASSISTANT PROF. SURGERY IN THE UNIVERSITY COLLEGE AT CHARITY HOSPITAL.

To-day, gentlemen, I shall call your attention to another variety of rectal disease, associated with hemorrhoids, viz.: *fistula* and *fissure* of the anus. First we will say a few words in reference to fistula in ano, and then we shall examine and operate upon this patient before you, who has for some time suffered from a variety of this disease; and afterwards you will be shown two other patients who, though the subjects of fistula, will enable me to demonstrate to you the other varieties of this condition. You will find that among the diseases of the rectum, fistula is one that is exceedingly frequent; and you may see it both in the young infant and the old man, but observed oftener in the male than the female. The earliest age which it has occurred to me to observe this affection was in a child eighteen months old, and in whom it had been known to have existed for six months. It was an example of what I shall presently describe to you as a complete fistula, half an inch in length, and situated posteriorly towards the coccyx. I have often seen it in this hospital in very old men, but their ages I am unable to give you. With respect to its frequency, it has been said by a recent writer, to be the most common of rectal diseases which are observed in the adult; and the data for this statement is taken from the case-books of a hospital specially devoted to the treatment of rectal diseases. In general practice, however, I take it that you will see and hear more of hemorrhoids than the one which we shall study to-day. In considering fistulas we have also to speak of abscesses, for the fistula may be said to be but the result of abscess. Now, what are the exciting causes of this trouble? They may result from what we are obliged, through ignorance, to call "taking cold." Thus a person, as a result of sitting down upon a cold or damp stone while overheated, has an inflammation set up in the anolar tissue immediately around the verge of the anus, or else in the locality which you know as the ischio-rectal fossa, and as a consequence of this, its termination may be abscess and fistula. Should you chance to see this trouble in its earlier stage, you would only notice the tissues in these localities, perhaps a little indurated or brawny, and painful to the touch, or else you might observe the parts presenting the appearance of a boil; which, after the discharge of pus, will often leave behind a permanent fistulous track, unless relieved by art. The reason of these fistulous tracks being so loath to heal of themselves, I think is often chiefly due to the mobility of the tissue in this neighborhood, though where there is a communication with the bowels, the presence of fecal matter is alone sufficient to keep the parts from healing. Another exciting cause is a traumatic one, viz.: the wounding of the mucous membrane of the bowels, either from fish-bones or some other hard substance that has been swallowed with the food, and as a proof of this, these bodies have been found in the abscesses that have formed outside the bowel. The most frequent cause I believe to be the passage of hardened fæces, especially in those who are the subjects of internal hemorrhoids, and have to strain violently at stool. In proof of this I think you will often find that the internal orifice of these fistulas is often situated just at the upper part of the base of a hemorrhoidal tissue (and may indeed be caused even by one of these pendulous tissues), and, again, the mucous membrane, just in this situation, is often very much thinned by constant tension exerted by these tissues, which often present a considerable obstruction to the free movement of the bowels. The lacerated wounds thus made in the internal coats, sets up a cellulitis which passes into the suppurative stage, and hence abscess and fistula result.

Again, the bowels may not be actually wounded, but the passage of these harder masses may be sufficient to set up inflammation in some of the follicles of the intestine, which gives rise to an ulcer which perforates the bowels, and the result is the same as in the former case. This condition is the one which probably takes place in those constitutions which have been vitiated from disease, and hence, perhaps the cause that fistula may be so often (if looked for) observed in those who are suffering from phthisis. Let this suffice then for some of the causes.

Now, gentlemen, from some remarks I have just made, I by no means wish you to infer, that every induration or boil that you may see in the neighborhood of the anus is certainly going to give rise to fistula. The tendency that way, it is true, is very great, and may indeed so result, in spite of surgical aid, yet, on the other hand, timely treatment, such as warm fomentations to the parts, or when pus is present, free incision, so as to give ready exit to matter, and then rest and attention to the parts, may spare a patient from the unpleasant result of fistula.

I said I would show you some varieties of fistula to-day. Here, for example, is a man who for some time has had what we term a complete fistula, and upon whom we shall presently operate. By the term complete, we mean one that has not only an external opening, but also an opening into the bowels. Thus you see I readily pass this silver probe through the external opening and along the fistulous track for nearly an inch, and on turning the probe you see it has passed out of the anus. Now, very many fistulæ, which upon first examination may appear to you incomplete, I feel sure, if you use a little care, and do not seek for another opening too high up the bowel, you will find to be really as complete as the one you have just seen. But in the case of this woman now upon the table, I feel sure that this is not the case. Here you perceive a small opening from which flows a drop of pus: taking this same probe I pass it into the opening, and you see it passes up along the side of the bowel, perhaps as far as in the other case. Now introducing the index finger of my left hand into the bowel, I feel the probe distinctly through the coats of the intestine, but after careful examination no communication with the bowel is detected. This, then, is a variety of incomplete fistula, and we call it a blind external fistula, because it has no internal opening.

While this patient is on the table we shall proceed to operate at once, for fear her courage should fail her at a subsequent time. The operation will consist in first converting this into a complete variety, and I do this by passing a director through the fistula, and when it has reached the end of the fistula I turn it and thrust it into the bowel, taking care at the same time not to wound my finger which is in the bowel. Now by raising up the end of the probe in my hand I cause its point to pass out of the bowel; if the patient will strain down this manœuvre will be facilitated. Now I pass this sharp-pointed bistoury along the groove of the director, and cut through all the tissues which bridge

over the director, and the fistula is now laid open. After this is done you had better search with the probe to see if perchance there is any fistulous track extending above, that you have not opened up. Should you find one you had better proceed at once to lay it open, else your operation may not prove a radical success. If the edges of the fistula, after laying it open, show a tendency to curve in, it will be beneficial to trim them off with the scissors, else they may offer a serious obstacle to the wound healing from the bottom. The after treatment will consist in placing a small piece of lint in the bottom of the wound, and this will be changed from time to time; and each time as soon as granulations show themselves, which will be in a few days, the size of the lint will be diminished. The method that is pursued by some of packing the wound with a large quantity of lint, I believe, accomplishes no good, and certainly is a source of great annoyance to the patient, giving rise, as it does, to tenesmus and straining to extrude this foreign body. A pad of dry lint and T bandage, such as you saw me use after operating on piles, will afford considerable relief to the pain that follows the first four hours after the operation. The patient will now be placed in bed, and the bowels kept confined for a day or two. After the fistula begins to fill up, you may allow your patient to sit up or lie upon a lounge. If you let them move about the room, union is greatly delayed. In about two weeks, such a fistula as the one just operated on, will, as a rule, have healed. Should at any time the wound appear indolent, you treat it by stimulating applications, as the balsam of Peru, or a mild solution of carbolic acid, or the black wash; the balsam of Peru is the one most frequently used in this hospital. In the majority of cases I do not think any of these will be required. The sooner a fistula heals after the operation the better; should they be sluggish in this respect, you must not only pay attention to the general health of the patient, but examine carefully the fistula, and see that the pus has not burrowed, thus giving rise to other fistulous tracks. If, after your patient has been going about, he complains of pus coming from the bowel in any considerable quantity; examine carefully for such fistulous track that has not healed: if you find it lay it open at once, and keep him quiet till it has thoroughly healed. You will perhaps hear of patients that after having had a fistula cut, have afterwards never fully regained the power over their sphincter, and as a result have suffered more or less from incontinence of pus. Fortunately this is a rare accident, and must probably be due to a careless and rash mode of operating, as in making, unnecessarily, a too free division of the whole sphincter muscle in more than one place at the same time, and perhaps in carrying your incision too far backwards into the surrounding tissues towards the buttock, or else it may be due to improper or entire neglect of after treatment, and this may be as much due to fault on the part of the patient as on that of the surgeon.

From what I have seen I would advise you, should you meet with a case of fistula having two external openings, one on either side of the bowel, not to divide the sphincter freely on both sides at the same time; you had better make two operations if necessary rather than run the risk of destroying or so weakening the sphincter as to leave your patient in a condition worse than before. This fact was very strongly impressed upon my mind by the case of a lady whom, a year ago, I was called to take care of. I found her in a most deplorable condition, having no control over fæces or flatus; she had been operated upon five months before for "two fistulæ." I found the sphincter had been completely divided on opposite sides, and the incision on both sides carried far outwards towards the buttocks, and the anus gaping wide open. The operator (for I will not call him a surgeon) had left the case without any appropriate treatment, and the result was what I have just stated. By means of paring the edges of one of these large holes, which was the result of his operation, and retaining them together by silver suture, union took place, and she was thus enabled to have great control over her motions, and go about with considerable comfort.

I shall speak further on in reference to other modes of treatment that are practised, besides the one with the knife; at present I wish to refer to some other forms of fistula, while a patient is being placed under ether. There is another form of incomplete fistula, viz., blind internal, because it has no external opening, only an opening communicating with the bowel. I shall not do much more to-day than briefly refer to it, as I have no case of the kind to show you. Without care on your part this fistula may pass undetected. It is not of very frequent occurrence, but when present is a very painful one at times, and the symptoms are often very like those attendant upon fissure (a disease I will at some time show you, and make some remarks about). The opening of this fistula in the bowel is at times very large, thus allowing of ready ingress of fecal matter, which induces its painful train of symptoms, and with the finger in the bowel you may often feel its indurated track. In operating upon these fistulas you have to pass a probe or director, curved so as to enter the opening and pass down the side of the bowel; when its point is felt beneath the skin you cut down upon it with your knife, thus converting it into a complete fistula. The operation is then completed as in the case you have just seen.

These fistulas, if left to themselves, will often become complete, but in so doing, if the process is not rapid, considerable tissue may become undermined in the attempt. From what has already been said you will understand that many of the complete variety you see originally began as an incomplete or blind internal fistula. There is still another form which has been spoken of by some as the horse-shoe fistula. It has but one external opening, and perhaps at first sight appears simply as an ordinary complete fistula; but upon laying it open you will find, by means of the probe, several fistulous tracks starting from this old fistula (if I may so call it), and passing in different directions, so as perhaps to completely encircle the bowels. In these cases, after laying open the main track, these tributaries, so to speak, will have to be opened up before a complete cure will result, and this may be done without cutting the sphincter muscle too extensively, for many of these fistulous tracks pass just beneath the mucous membrane; at least I have found it so. While speaking of laying open these sinuses I must tell you that the profession is divided somewhat upon the question—whether it be essential to lay open a fistulous track which extends beyond the internal opening? If this is not done, I know from experience that a perfect cure may result, and I also know from experience that the reverse of this will at times follow, necessitating a further operation. If the entire length of the fistulous track can with safety be laid open, I believe it the best plan to be pursued. Yet I have seen cases where I have deemed such a proceeding hazardous for fear of hemorrhage that would be difficult to control, so high up the bowel did the sinus extend beyond the internal opening. These cases will have to be dealt with, as each individual case may seem to the surgeon to demand.

No one rule, I think, can be laid down that will apply to all such cases with safety. In seeking for the internal opening of a fistula, where shall we look for it? This very point, let me tell you, has been the subject of considerable investigation and controversy, some contending that it was just within the anus, others that it was an inch or more above the anus. I shall not refer to this matter further than to say that I think you should seek for it about half an inch from the anus, and in the majority of cases it will be found in about that situation, often, indeed, it may be more superficial, and because it may be so superficial it is not to be neglected, but to be operated upon just as well as if it extended two inches up the bowel. In examining if the fistulous track extend higher up than the internal opening, you must hold your probe very lightly, for it will be a very easy matter to run the probe up the surrounding tissues or between the coats of the bowel, thus giving the impression of an extensive fistulous track, where in reality none exists. I will now show you in the person of this woman, who is very much run down from prolonged suppuration, several fistulæ, all of which communicate with the rectum. Her history is briefly this. Some months ago she had a large abscess in the ischio-rectal fossa, which, after long suffering, broke externally. At present you will notice a fistulous opening by the side of the anus, and the probe can be passed through this either into the bowel, as you now see, or else, by turning it outwards, it enters the ischio-rectal fossa. On the left side, about the middle of the labia, is another fistulous opening, which leads into the bowel just at the point of opening of the other sinus, and lately another opening has appeared in the left groin, and I doubt not, like all these sinuses, communicate with the ischio-rectal fossa, as the probe passes down through the abductor muscles. The probe passed through the opening by the side of the labia can also be passed downwards and backwards thus, until it is arrested by the tuberosity of the ischium, which is discovered to be increased. All this condition is the result of a neglected abscess in the ischio-rectal space, and from the history she gives is a result of gonorrhœa and a large chancroid, followed by cellulitis in this immediate vicinity. The abscess in the ischio-rectal fossa has been freely opened and is washed out with carbolic acid lotion. Her general condition, as you see, is very bad, but under stimulants and a better diet than she has been accustomed to, she has greatly improved since she entered the hospital. At present, however, she is in no condition for any further remedial operation. I only present the case to you that you may see some other situations where fistulæ communicating with the rectum and this fossa may open, other than I have just spoken of.

The diagnosis of fistula is usually easy, and the method of detecting to which variety it belongs, you have already seen. You must bear in mind that we have fistula in the neighborhood of the anus, which, however, are not rectal, but urinary; these latter, however, are very characteristic; usually they are of a rose color, elevated, with a small depression in the centre, and though they may exude a drop of pus, the discharge is chiefly fluid, and of urinous odor, and the discharge takes place during or just after the act of micturition. The direction which a probe introduced into them will take, together with the general history of the case, should suffice to prevent you from falling into error in your diagnosis. Patients who come to you with fistula will often only complain of hemorrhoids, and give you the symptoms that I have already given you when speaking of that affection. Indeed, they may only become acquainted with the fact that they are the subject of fistula from your examination. On the other hand, they may give you the symptoms of having suffered from an abscess in this vicinity, and complain of their clothing being soiled from a purulent or fecal discharge, which condition may be more or less constant. In examining a patient with hemorrhoids it is always well to seek carefully whether or no fistula does not also exist, and if you are not careful in those examinations, a small fistula may escape your attention. *Is there any choice as to time of operating?* If you propose to operate at all, the sooner after the discovery of the fistula, I think, the better, except it be just after an abscess has been opened and the parts are inflamed; here we should prefer to delay till the acute symptoms have subsided, and we have only a fistulous track to deal with. Fistulæ that are met with in connection with stricture of the bowel, of course you should not think of interfering with before you have relieved the stricture, for before this your operation could confer no benefit upon your patient. In your text-books you will find much in reference to operating upon patients the subject of phthisis. We have not time now but to refer to this point. My own views are that this idea has been carried to an extreme by many. If a patient have some deposit in his lungs, and his general condition be quite fair, and yet suffers from a troublesome fistula, I see no reason why you should withhold relief from him. If he be far advanced in tuberculous disease, you would of course not think of operating for fistula, or for any other cause hazarding an operation. You have now seen two operations by means of the knife, but I must refer to other modes that have been in vogue, and are still in some instances practised. Before enumerating these, I should tell you that you may see cases that get well without any treatment, or at least you will read of them in the books; but this is very, very far from being the rule. Formerly, caustics were freely used for the purpose of destroying fistulæ; this now is abandoned, unless we make an exception to the practice used at times of injecting the sinus with stimulating fluids, such as tincture of iodine, nitrate of silver, sulphate of copper, etc. These, though not very reliable, may prove of service in some superficial varieties. The ligature applied, as I now show you, has been often resorted to, and in those who are timid of the knife, or will not lay up for a few days, it can be used with every prospect of success. Its great objections are, that it is not only a more painful method, the ligature having to be tightened from time to time in some cases, the length of time that may elapse before the ligature cuts through, and the uncleanliness necessarily attendant upon it. Certainly, of all methods which have been used, the one by the knife is the most satisfactory in every respect, and therefore, when possible, should be the one you select.

Treatment of Spasmodic Asthma.—Dr. Julio J. Lamadrid recommends the combination of chloral hydrate with the bromide of potassium in the treatment of spasmodic asthma. The following is the formula which he employs;

℞ Chloral hydrat..... ʒ v.
Potassi bromide..... ʒ ijss.
Syr. flor. aurantii,
Aquæ dest., aa. .....f. ʒ i. M.

Sig. A teaspoonful in half a wineglass of water every two hours, until sleep is induced or dyspnœa is relieved.—*Phila. Med. Times*, Aug. 29, 1874.

NOTES UPON CASES

PRESENTED AT THE

CLINIQUE FOR DISEASES OF WOMEN,

HELD AT THE COLLEGE OF PHYSICIANS AND SURGEONS.

By T. GAILLARD THOMAS, M.D.,

PROF. OF OBSTETRICS AND DISEASES OF WOMEN.

PELVIC HÆMATOCELE.

Mrs. S——, æt. 36; been married 10 years, but has never been pregnant.

History.—Menstruation ceased in January, 1873. This was followed by headache, "pains all over the body," and general discomfort.

In March, 1873, she was taken suddenly ill. She suffered at that time "from pains through the whole body." On some days she was able to attend to her avocations, and on others was confined to bed. She gradually grew worse from day to day, and in May, 1873, was taken very suddenly worse while lying in bed. She was suddenly seized with violent pain in the abdomen, and had a sudden sense of prostration and weakness. She continued ill until June, 1873, when she had sufficiently recovered to be able to get out of bed. The pain which suddenly seized her in May was terribly severe, extended over the entire abdomen, but was not accompanied by any discharge from the vagina.

November, 1873, menstruates regularly.

Physical Examination.—Uterus of normal size. Fibrous tumor upon one side. Nothing specially noticeable about the tumor. The tumor has probably been connected with the uterus for a long time, and is the probable cause of the sterility. It is a sufficient cause at least, and we accept it.

The question arises, What has been the probable history of this case viewed pathologically?

It is probable that, from some cause, there was violent ovarian congestion last January. A result of that congestion was an arrest of a flow of blood when there should be a regular hemorrhage. When she was seized last May in the violent manner she describes, she was seen by one of the gentlemen connected with the clinique, who found upon physical examination that there was a large rounded tumor in the pelvis, which had a hard, fibrous feel, and completely surrounded both the uterus and the uterine fibroid we have found to-day.

In July this large mass was being absorbed quite rapidly, and to-day there is no trace of it remaining.

That large rounded mass was in all probability a pelvic hæmatocele.

The necessary examinations were made at that time to render diagnosis positive.

These are the facts which present themselves in connection with this case.

There was a general disordered condition of the ovaries, which continued until rupture of blood-vessels took place, and a large hard tumor was developed, accompanied with great constitutional disturbance. This tumor gradually became absorbed and passed entirely away.

The fibrous tumor remains, and has not in the least been interfered with.

There is one point in this case which is of special interest, and that is, the case illustrates the liability of a practitioner's being deceived with regard to the effects of remedies in the treatment of uterine fibroids. The condition of this hard fibrous feeling mass in the pelvis was, last May or June, such as might have been easily mistaken for a fibrous tumor of large size. If such a diagnosis had been made by one who believed that iodide or bromide of potassium has the power to diminish the size of uterine fibroids, it would have been claimed that here was an example of reduction in size of a fibroid tumor by the administration of those remedies.

"False facts," says one of the old writers, "are more dangerous even than false theories."

The condition of the patient to-day is simply that which requires supporting treatment.

CASE II.—PELVIC HÆMATOCELE.

Mrs. X——, æt. 23, and the mother of one child.

History.—She was perfectly well until two months ago, when she was taken suddenly sick at the stomach. Nausea has continued from that time until the present without very much diminution. Two weeks ago she became suddenly faint, and remained unconscious for some time. When consciousness was restored, she felt very weak, but was able, within a short time, to walk home, which was only a short distance away. Since then she has lain in the bed some of the time, and other portions of the time has been up and about the room. Has fever occasionally. Pulse and temperature about normal. Has severe pain in both sides and severe backache. These pains are almost continuous.

This completes the history of this case.

Physical Examination.—Patient lying upon the back. Vaginal touch shows cervix uteri thrown forward. Vaginal junction is firmly pressed out by a hard mass, which, at the same time, presses against and closes the rectum. By the aid of conjoined manipulation it is found that this mass fills Douglas's cul-de-sac, is immovable, and is not sensitive to the touch.

The question arises, What is this mass? The history of the case indicates that there was, at a certain time, a sudden loss of blood. Physical examination detects the presence of a smooth mass in the pelvic cavity which, by its mechanical presence, interferes more or less with the viscera of that cavity; and these two facts have led us to the conclusion that it is a pelvic hæmatocele.

Treatment.—In the present case the indications are such as will lead to the administration of quinine, iron, good nourishment, eminently a supporting plan of treatment, and rigidly to insist upon rest.

Here the question may arise, Cannot something beneficial be done for this class of cases by surgical interference and removal of the blood?

One case fell under my observation where the hæmatocele burst, and caused the death of the patient. The question in that case was, Might not the life of the patient have been saved if puncture had been resorted to?

Another case came under my observation, in which the aspirator was used, and the blood removed. At the time of the operation the patient was doing well, but in the light of the other case, some anxiety was felt lest the same termination might take place. The operation was performed and the patient died. The question in the second case was, Might not the life of the patient have been saved, if the operation had been *avoided?*

These two cases are selected simply as illustrative of the position in which we find ourselves placed relative to the question of surgical interference.

It is to me very often a most perplexing question, and one which I decide with great hesitancy.

If called to see one of these cases at the outset, measures should be adopted to bring about reaction; keep the patient perfectly quiet in bed. Empty the bladder with the catheter, and bowels with enemeta if necessary. Soothe with opiates.

After some weeks have elapsed, counter-irritation by means of repeated blisters may be serviceable.

CASE III.—POLYPOID ELONGATION OF THE CERVIX.

Mrs. H——, æt. 30; widow, and the mother of one child.

History.—Perfectly well up to July, 1873. At that time she began to suffer from discharge of blood from the vagina, which has continued almost steadily until the present time (November).

The copious loss of blood is the chief symptom of which this patient complains, and it is for the purpose of obtaining relief from this that she comes here.

A great number of hæmostatics might be administered to this woman, with the view of arresting "uterine hemorrhage," "menorrhagia" or "metrorrhagia," etc.; but, when the results of physical examination are shown you, it will become evident that their administration alone would be a very great departure from a rational method of treatment.

Physical Examination.—I have seen only three cases of this kind.

There is a pendulous mass hanging down in the vagina which is connected with the cervix uteri.

The finger can be swept around the cervix, and there is an evident continuous connection between this pendulous mass and the cervix, except at one portion of its circumference. At that point, there is an opening. Introduction of the sound proves this opening to be the mouth of the uterus, for the instrument can readily be carried on into the cavity of the organ. The condition is one of polypoid elongation of about three-fourths of the cervix, leaving the remaining portion of the cervix and the os nearly in their normal position.

There is, therefore, a long tumor in the vagina; its upper portion consisting of the cervix uteri; its lower portion consisting of a prolongation of about three-fourths of the cervix uteri, and, upon its side, at the junction of the prolongation and the cervix proper, is an opening which is the os uteri. This tumor has never been within the cavity of the uterus, but arose from hypertrophic disease of the cervix.

Treatment.—The mass should be removed at once, for the woman is losing blood very fast in consequence of its presence. The tumor is exceedingly vascular, bleeding upon the slightest touch. It should be removed by means of the galvanic cautery if the apparatus were at hand. That would do away with the necessity of taking the precautions for controlling hemorrhage which we feel compelled to take while the tumor is removed by means of the *écraseur*.

To guard against the occurrence of troublesome hemorrhage, the tumor will be drawn down far enough to permit us to cut a narrow groove around the base of the tumor for the reception of a strong ligature.

This ligature will be applied by transfixing the pedicle with a curved needle armed with a double ligature, and then tying each half separately. The ligature, at present, will be tied only sufficiently tight to retain it in the groove. We now have a means at our command which places any hemorrhage that may occur, either at the time of the operation or subsequently, within ready control.

A second girdle is made around the neck of the tumor, just below the first, for the reception of the chain of the écraseur. (The tumor was then removed.)

The greatest care must be exercised in controlling any hemorrhage which may occur from such a stump as this one, for the reason that, after it has been permitted to recede into the pelvic cavity, it would be more difficult to gain access to it for the purpose of applying ligatures to the bleeding vessels. See to it well that all hemorrhage is arrested before releasing the stump from your grasp.

A bat of cotton, wet in a solution consisting of one part Liq. Ferri. Subsulphate and two of glycerine, is now placed against the stump and followed by a moderate tampon of dry cotton.

The ligature, thrown about the pedicle as a safeguard, can be removed within forty-eight hours after the operation if no hemorrhage occurs. If hemorrhage does occur, the ligature can readily be made tighter, placing the hemorrhage under control at once.

CASE IV.—PROCIDENTIA UTERI IN A VIRGIN.

Mrs. C——, æt. 25; married, and the mother of one child sixteen months old.

History.—Has been troubled with her present difficulty eight years altogether. When seventeen years of age, she lifted a heavy weight, a large tub of water, and while lifting it she "felt something give way within her," and has never been well since. Soon after, she could feel her womb come outside of her body. "Every once in a while," since she lifted the tub of water she has felt her womb outside of her body.

Physical Examination.—The uterus is now outside of her body. If the cavity of the organ is measured, without being replaced, it is found to measure, from the external orifice of the os to the fundus, five inches. When the uterus is replaced, and its cavity measured, it is found to measure only three inches. This is an important point; namely, the measurement of a prolapsed uterus should be made only when the organ is within the body. If made when the uterus is outside of the body, the parts are placed upon the stretch in such a manner that the measurement will be much greater than actually exists. Procidentia in the third degree, such as we have here, is exceeding rare in girls at the age at which this patient began to suffer from it.

The case is therefore interesting from the fact that it demonstrates the possibility of an inordinate muscular effort producing displacement of the uterus even in a virgin.

Displacement of the uterus may be produced by anything which increases its weight, such as sub-involution tumors, etc.; anything which produces undue traction from below, such as dragging of a tumor, etc.; anything which removes or enfeebles uterine support, such as ruptured perineum, constantly lying in bed developing mere laxity of fibre and want of tone in the uterine support, etc.; anything which forces the uterus downwards, such as abdominal tumors, violent muscular efforts, etc.

In the present case, it was a violent muscular effort which gave rise to pressure upon the uterus from above, overcoming all its supports, and down it came.

Treatment.—If, in this case, the uterus have been immediately restored to its normal position, it would not have suffered any permanent injury, for all the uterine supports would have had their power restored. As it is, this condition has been present so long that all the ligaments and tissues which assist in maintaining the uterus in its normal position have lost their elasticity, and perhaps, have undergone a hyperplasia

which forbids them ever returning to the performance of their normal function.

The volume of the vagina might be reduced, but the operation would promise but very little. In this case the uterus is so light that something, perhaps, might be accomplished by it.

The only thing which can be recommended with any degree of confidence of relief is the application of a pessary, but that would require a vast amount of patience upon the part of the practitioner, and perhaps equally as much upon the part of the patient.

Original Communications.

SURGICAL CASES.

By GEORGE E. POST, M.D.,

PROFESSOR OF SURGERY IN MEDICAL COLLEGE OF BEIRUT, SYRIA.

CASE I.—*Calculus in urethra removed by a valvular opening.*

A boy, six years old, entered St. John's Hospital in March, 1874, complaining of difficulty in passing urine. On examining with the touch, a tumor of the size of a pea was found just behind the junction of the skin of the penis and scrotum. On passing a catheter No. 4, the instrument was arrested by a gritty calculus, which could not be pushed back into the perineum, nor worked forward toward the meatus. After unsuccessful efforts to withdraw it by the spoon, and by Civiale's urethral process, the scrotum was drawn forcibly forwards in such a way as to bring the centre of the perineum over the stone, over which an incision was then made, and the stone extracted, after which the skin was allowed to return to its original position. A sinus, an inch and a half or two inches long, was thus formed, pointing backwards, and closed in a valvular way, so as to make the passage of urine into it difficult. Little swelling occurred, and but a few drops of urine passed by the wound, which healed entirely within ten days. Had the wound been made anterior to the scrotum, a troublesome fistula would have been the result.

CASES II. and III.—Two children, aged respectively two and seven years, were brought to me with stones impacted in the lacuna behind the meatus externus. In each case, the stones were removed by gradual dilatation without divulsion or incision.

CASE IV.—*Salivary calculi of submaxillary gland.*—A man of about 45 years of age had complained for several years of swelling and tenderness in the region of the left submaxillary gland. On placing one forefinger within the mouth, and the other beneath the jaw, and palpating between them, a hard mass was perceived, and a sensation of grating was distinctly felt. On pressing the gland, pus emerged from Wharton's duct. The gland was then firmly pressed up into the floor of the mouth; and an incision, half an inch in length, made over the hard body, when two calculi, one of the size of a bean, and the other of a pea, were turned out of a cavity in the gland.

CASE V.—*Fistula in perineo.* A man, 25 years of age, was cut for stone 15 years since by a native practitioner, probably by the Italian (median) method. A fistula was left in the perineum large enough to admit a No. 12 sound, and lined with an organized mucous membrane, surrounded by a tube of fibrous tissue, losing itself in the surrounding parts. This tube was not more than three-quarters of an inch in length, which is less than the usual depth of the membranous portion of the urethra from the surface in a man of that age. This fact was attributable to cicatricial contraction, which I have always observed in such cases to draw the urethra towards the surface, causing it to make an obtuse angle instead of a free curve in the perineum. The anterior portion of the urethra had suffered arrest of development, and would not admit an instrument larger than No. 8. The urine and semen all passed per perineum, thus at once emasculating the man, and making his life miserable. The treatment consisted in removing the fibrous track of the fistula, and restoring and maintaining the calibre of the urethra by the daily passage of bougies. At the end of two months, the fistula would barely admit a probe, and most of the urine and all of the semen passed per urethra. Owing, however, to the abnormal direction of the urethra from the cause alluded to above, a few drops of urine dribbled away at each act of micturition. After ineffectual use of nitrate of silver and the actual cautery, the small fistulous track was removed, and a space half an inch wide on each side of the raphe denuded, and the sides of the perineum drawn to the median line, and fixed by leaden clamps and silver sutures. An additional half-inch of depth was thus given to the perineum. Union of most of the denuded surfaces took place by the first intention, and within a month after the last operation the fistula was finally closed, and the patient was discharged cured.

CASE VI.—*Stricture of urethra treated by external and internal urethrotomy.* The case was one of stricture, which would only admit a capillary bougie, and as I had no tunnelled instruments, and could not get Maisonneuve's or Hott's instrument through the stricture, I incised the urethra as in the median (Italian) operation for stone, reaching the urethra at the junction of the bulbous and membranous portions, which was the posterior limit of the stricture. I then passed a small probe into the stricture from behind forwards, and followed it by a Maisonneuve's urethrotome, and incised the stricture, the length of which was an inch, upon its superior wall. I then passed a No. 12 catheter, from the meatus to the bladder, and left it in position 12 hours. After that I introduced it daily, leaving it a few hours in position, until the seventh day. After that date, I contented myself with introducing it daily, until the perineal wound was healed, and all tendency to contraction had passed away. The patient was discharged cured about a month after the operation.

CASE VII.—*Bilateral lithotomy, followed by fatal colliquative diarrhœa. Left kidney atrophied, and right kidney hypertrophied.* A man about 45 years of age entered St. John's Hospital for stone in the bladder. After the customary test examinations as to irritability of the bladder and tolerance of instruments, etc., and keeping him in the hospital for a week, to become used to the confinement of hospital life, he was chloroformed, and the incision for the bilateral operation made in the usual manner. The great depth of the prostate and the thickness of the inferior wall of the bladder made it easier to complete the incision with a probe-pointed bistoury. A stone of nearly two inches in diameter was extracted with much difficulty, owing to the long, unyielding track of the incision through the infiltrated prostate, and the extraordinary roughness of the stone, which was covered with stalactitic projections, and as hard as flint. The patient rallied well from the operation, and for two days had little reaction. On the fourth day he was suddenly attacked with colliquative diarrhœa, and his

strength gave way almost immediately. On the fifth day hiccough commenced, and continued almost without cessation until the time of his death, which took place after twelve days, with symptoms of passive congestion of the lungs. During the whole of this period, he seldom referred to the region of the perineum or bladder, and experienced no symptoms of irritation in his urinary organs. On opening the chest after death, the right lung was found glued to the parietes of the chest by old adhesions, and the whole of the lower half of the lung hepatized. The left lung was somewhat congested, but not hepatized. The other viscera of the chest and abdomen were normal, excepting the urinary apparatus. The bladder was found divided into two compartments by an hour-glass contraction, and the walls of the lower half in which the stone had lodged were thickened to two-thirds of an inch, and the mucous membrane was thickened and plicated, and covered with patches of superficial ulceration, seemingly caused by the irritation of the rough stone. Singularly, the patient had suffered little pain from the presence of the calculus, or the process of exploration. The left urether was slightly dilated near the bladder, but before crossing the iliac artery, was attenuated to a small fibrous cord, which was with difficulty traced to where the kidney ought to be found. There a hard body of the size of a small almond was found, and enclosed in its fibrous tissue two calculi, one of the size of a white bean, and the other of a pea. No vestige of kidney tissue remained. The right urethra was dilated and sacculated, and resembled the small intestine in diameter and thickness of walls. It proceeded from a kidney twice the natural size, the pelvis and infundibula of which were dilated, and somewhat ulcerated. The kidney tissue proper was not diseased. Some sand was found in the infundibula.

The noteworthy point of this case was the absence of all external signs to show that one kidney was completely useless. Doubtless, in those cases in which the removal of one kidney by a surgical operation is well borne, there must be such an increase of size in the remaining kidney before or soon after the operation, as to enable it to perform the function of its fellow.

CASE VIII.—*Necrosis of the femur involving its upper and outer portion.*

A boy, 12 years of age, reported himself at the hospital of the Syrian Protestant College with a small sinus just below the point of the trochanter major. I incised the skin, and without opening the involucrum, was able to draw out two sequestræ from the shaft of the femur, one of which was three inches long, and as thick as a common pen-handle. At a recent meeting of the New York Pathological Society, a sequestrum from the upper third of the femur was presented, and no other case was remembered by the members then present, in which necrosis had occurred in that part of the thigh. The case reported is the only one in which I have met with necrosis in the upper third of the femur, out of perhaps a hundred cases of necrosis on which I have operated during the past six years. Most of the cases occurring in the femur affect its lower third or fourth. I have several cases in my cabinet involving the whole cylinder of the bone, and from one-third to one-half its length.

CASE IX.—*Case of compound comminuted fracture of the ramus of the ischium and pubes without injury of the urethra, or bladder, or rectum.*

A young man working in the sand-stone quarries of Beirut was crushed under a mass of falling stone, dislodged by the caving in of the quarry wall, and a stone driven into the perineum in such a way as to crush the rami of the ischium and pubes, and divide the internal pudic artery, without lacerating the urethra, or bladder, or rectum. The patient has had severe suppurative fever, and now (the twelfth day from the time of the injury) the wound is granulating well. The cavity left in the perineum would admit a large egg, and has several pouches extending in the direction of the inner face of the tuberosity of the ischium and towards the obturator foramen, and the rough ends of the fractured bone may be felt in the direction of the tuberosity of the ischium and the body of the pubes. About an inch of the bone is lost. Not less than half an inch of the rami are denuded on each side of the hiatus, so that when the dead bones shall have become separated, nearly the whole of the rami will have been lost on the affected side. The acetabulum and the body of the pubes are, however, to all appearance quite sound. The receipt of such an injury without urethral or vesical complications is exceedingly rare.

A CASE OF PERITYPHLITIS. — OPERATION ON EIGHTH DAY.—RECOVERY.

BY CHARLES KELSEY, M.D.,

NEW YORK.

LEAH CABARET, age 16, French. The patient, previously in excellent health, was taken on the eve of April 8, 1874, with pain over abdomen and vomiting, lasting all night. Next morning, after an enema, had three good passages from bowels, the vomiting ceased, and pain became localized over right iliac fossa.

April 10. Pain increasing in fossa; great tenderness on pressure; sleeplessness; some fever. A dose of castor oil given by parents was followed by one passage from bowels, in fair quantity.

April 11. No improvement in pain. Physician sent for.

At first examination near the end of the third day of trouble, the patient was found, temperature 101.5, pulse 120, and a hard, painful tumor in right iliac fossa. There was dulness reaching half way from ant. sup. spine to umbilicus, and for about an inch and a half of this distance flatness on percussion. There seemed to be also a slightly greater fulness on the surface over this fossa than on the other side, but no redness or fluctuation.

Persistent questioning failed to reveal that patient had eaten anything liable to become fixed in appendix.

Ord. Sol. Magendie, q. s., to relieve pain.

April 12. Condition unchanged.

April 13. Small, voluntary mucus passage from bowels.

April 14. Pain, tenderness and swelling in fossa continue undiminished, slight increase in area of dulness. Pulse ranges from day to day at about 110, and temperature about 101.5. These are the only symptoms—no vomiting, no chills, no pressure affects firm tumor.

April 16. (Morning of eighth day.) Case seen by Dr. George A. Peters in consultation. At this time the border of tumor, as well as could be felt by deep pressure on abdomen, extended about half way between ant. sup. spine and umbilicus; but for some distance further there was dulness and tenderness. Temperature 110, pulse 110. The tumor had not increased in superficial area for forty-eight hours, and there was no redness or fluctuation.

The diagnosis was confirmed by Dr. Peters, and with his approval and assistance, and that of Dr. Abbe, the operation was performed.

The incision was four and a quarter inches long, beginning at a point one inch above ant. sup. spine, and running parallel with, and an inch above, Poupart's ligament. After cutting through the external oblique, the smallest needle of aspirator was plunged into the tumor, and a few drachms of pus drawn out. The incision was then carried on to transversalis fascia, and a large-sized aspirator needle again used, through which there was an escape of foul gas and pus, without it being necessary to attach the instrument.

Leaving this second needle in as a guide, an incision an inch long was made through the fascia, and two or three ounces of pus escaped.

The cavity of the abscess was carefully explored with the little finger, and the convoluted intestines could easily be felt, apparently covered by the parietal layer of peritoneum separated from the fascia by the collection of pus. But this could not be decided positively; nor could it be found with certainty whether there had been perforation of the appendix or colon, though it was thought by two of us that there was a marked fæcal odor about the pus and wound immediately after the abscess was opened.

Wound kept open with lint, and poulticed.

Next day the temperature was normal. Pulse 98; pain greatly relieved; wound discharging well; patient much improved every way.

April 22. One large passage from bowels, assisted by enema.

After this the bowels moved easily and readily every day or two, and by May 8, one month after the beginning of trouble, the wound was almost entirely healed, the patient up and about, and apparently entirely cured.

Progress of Medical Science.

THE LOCAL TREATMENT OF CYSTITIS IN WOMEN.—Dr. Braxton Hicks, in a paper recently read before the south-east branch of the British Med. Association, observes that, in speaking of cystitis, he means the more severe forms, such as that which, among other causes, arises from the effects of prolonged labor, from malignant diseases of the organ, or from paralysis, etc. The only general treatment that may be used with advantage is opium or some other anodyne, and such corrective as may modify an alkaline state of the urine. Supposing it to be alkaline and ammoniacal, it is best to take a gum elastic catheter, which is open at the extremity as well as the sides, and, having oiled it, to pass it gently into the bladder for as short a distance as possible, and withdraw the catheter again just as the bladder is on the point of being emptied, which saves the mucous membrane from flapping down on the ends. Then, with a syringe, throw up through the catheter warm water slightly acidulated with either nitric, hydrochloric, or acetic acid. Vinegar does very well; if nitric or hydrochloric acids are used, about two drops of the strong acid to the ounce of warm water are sufficient. As soon as the patient complains of a desire to micturate, allow it to flow away again. This should be repeated till the bladder seems clear of the phosphates and mucus. About half a pint of acidulated water will generally suffice. Then inject also, through the catheter, about one grain of morphine dissolved in an ounce of water; quickly withdraw the catheter from the urethra, and instruct the patient to retain the injection as long as possible. It is rare that the single application does not give great relief. This treatment can be repeated twice daily, if the case be very severe. When the urine has not been markedly alkaline, Dr. Hicks simply injects the solution of morphia, or first washes out the bladder with warm water, or warm solution of permanganate of potash. After some days of this treatment, he sometimes employs, instead of the permanganate of potash, a solution of chlorate of potassa, about three or four grains to the ounce, using plenty, drawing it off after a few minutes, according as it gives pain, and then injecting the morphia. Regarding the dose of morphia, he adds that if there be no blood in the urine, and the patient feels no constitutional effects from a grain, he increases it to two grains. If blood appears in the urine, it is a sign of some abrasion, in which case the morphia is more likely to be absorbed; yet he has never seen any unpleasant symptoms from two grains. The more that is used, without affecting the system much, the better, as it acts locally, by subduing the nerve-irritation, and the tenesmus of the bladder, and the crushing of the mucous membrane, produced by the contractions of the muscular coat. As the acute symptoms subside, more astringent washes may be employed, such as two or three grains of tannin, or three or four drops of solution of perchloride of iron in the ounce of warm water, using the morphia solution immediately after. The choice should depend on the amount of pain caused, the object being to produce no more than is necessary. If the urethra be very tender, a bougie or catheter, covered with tannin, made very smooth, and dipped in gum-water, may be introduced. A probe, on which a film of nitrate of silver has been fused, may be tried, or the surface may be mopped out with a piece of cotton dipped in perchloride of iron. In chronic cases a solution of nitrate of silver containing from five to ten grains to the ounce may be injected, followed by the introduction of two grains of morphia in solution. In the acute stages the warm hip-bath and warm sponge to the genitals are not to be omitted, together with perfect rest in bed; the bowels must be kept gently relaxed, and the diet should be simple and light.—*Brit. Med. Jour.*, July 11, 1874.

A NEW THEORY OF THE ORIGIN OF MALARIAL FEVERS.—An article in the last (September) number of the *Nashville Journal of Medicine and Surgery*, by *Dr. Duff Child*, is entitled *Cyanogen, the Radical of Fever and Ague Poison*. As a specimen of original research the article will doubtless command respect and create no little comment. With regard to the balance of truth and falsity in the views expressed, it is not our province here to decide. The points of weakness are obvious, but in general the argument is well considered and certainly ingenious.

According to Dr. Child, the marsh miasmata are virtually cyanogen or some compound which contains this gas. He believes the cyanogen to be a product of the decomposition of both vegetable and animal matters. This gas is not usually supposed to be produced in the decomposition of these matters. But the writer claims that under certain conditions or at certain stages of the decay this may occur. For his explanation of this point we must refer the reader to the original article. In order to ascertain the presence of cyanogen in malarious localities Dr. Child made the following application of Schönbein's test: Strips of paper which had been saturated with the solution of copper were left over night in fissures found in the bottom of recently dried-up ponds, near localities where intermittent fever prevailed. The ends of the strips of paper resting in the fissures were found, the morning

after, tinged with blue, "indicating the presence of hydrocyanic acid or some decomposing cyanide." It was noticed also that the strips turned slightly blue while drying in the Doctor's office, which was situated in a malarious district. The writer admits that this test is not conclusive, since by means of other tests he was not able to detect cyanogen in the soil of these regions.

Various authorities are quoted to show that the idea of volatile organic matters in the air being the source of intermittent fever and kindred diseases has been often entertained by others.

The writer endeavors to show a certain correspondence between the symptoms produced by the poisonous compounds of cyanogen, and the symptoms both acute and chronic caused by "marsh poison." But he assumes that the pathogenetic action of these poisons in the state of vapor is not fully known.

With this hypothesis regarding the nature of the malarial origin he proceeds to draw such conclusions as would account for the production and phenomena of the malarious fevers. Supposing a healthy individual to be placed in an atmosphere contaminated with the above poison, it would follow that those organs whose office it is to eliminate such elements from the blood would have an extra labor to perform. They would, moreover, have to remove "the damaged and now hurtful constituents of the blood" which are due to the action of the poison upon the fluid. So long as the emunctories are equal to the increased task imposed upon them, so long will health be preserved. "But suppose, from any cause, the working of any one of the organs mentioned is interfered with, as we know is likely to happen from changes of temperature; or suppose that the amount of work required by all three organs, when at their best, was beyond their power, then would a febrile condition be at once established; in other words, the individual would manifest all the so-called prodromic symptoms of an attack of ague—would be in the initiatory stage of febricula. This would last a longer or shorter time in different individuals or in the same person, according as the functions of the excretory organs were habitually, actively, and thoroughly performed."

But the poison goes on accumulating till these organs can no longer accomplish their task, and exhaustion and a profound depression of the system ensues.

"This stage of depression would be followed by a stage of reaction, shown by a rising thermometer during the chill and fever; and finally would come a sweating stage or crisis, which is but a vigorous effort at the elimination of the accumulated poison." Should this effort result in complete elimination of the poison, an intermission occurs; or in case of but a partial elimination, a remission follows.

Thus he explains the periodicity of malarial fevers. The variations in the length of the intermission, giving rise to the different types of paludal fever, are explained on similar grounds, taking into account the influence of season.

A very ingenious explanation is given of the origin of the anæmia, together with the enlargement of the spleen, in long-continued malarious diseases. The writer begins with a quotation from Virchow's "Cellular Pathology," where a change is described as sometimes taking place in the "respiratory substance" of the blood-corpuscles—a kind of paralysis of the blood-cells resulting. Certain poisonous substances are mentioned as capable of effecting this change; for example, arseniuretted and cyanuretted hydrogen may impair the respiratory power of the blood-corpuscles in the above manner. Accepting this view, he supposes that in an individual exposed to the malarial poison a large number of the red corpuscles are affected as above described. During the stage of depression quantities of these paralyzed corpuscles would accumulate in the spleen, and be then under conditions favorable to their disintegration. The destruction in this way of the red corpuscles would occasion anæmia, and the repeated distentions of the spleen would give rise to chronic enlargement or hypertrophy.

With regard to the treatment of malarial diseases the writer naturally suggests a modification of the therapeutics in accordance with his new doctrine. Some agent having an affinity for cyanogen would be indicated. He claims that "mercury in some form is indispensable to the successful treatment of malarious fevers," and he ascribes its beneficial effects to its peculiar affinity for cyanogen. Another metal, also having this affinity, which, it is surmised, might have a similar effect, is palladium, which, however, has never yet been embraced among the materia medica.

The action of quinine, arsenic, etc., is accounted for in supposing that they prevent and cure ague by "rendering the blood, and through it the whole system, proof against the action of the morbid poison."

Diagnosis of Blood-Stains.—It is claimed by Dr. Joseph G. Richardson that the residuum of a dried blood-clot, left after the action of pure water, is mainly composed of the cell walls or capsules of the red blood-corpuscles. His reasons for affirming the existence of such cell-walls are based upon former investigations of his, made especially with respect to the gigantic blood-disks of the menobranchus. In this case crystals of hæmato-crystalline were seen "to prop out a visible membranous capsule." The possibility of measuring the cell-walls of the globules remaining in an old blood-clot or in blood-stains upon articles of clothing, with sufficient accuracy to discriminate between the blood of man and that of many of the lower animals, is maintained with much positiveness in a recent paper by Dr. Richardson, read before the Biological and Microscopical Section of the Academy of Natural Sciences. The paper is published by recommendation of the Society in the July number of the *American Journal of the Medical Sciences*. Most authorities have held hitherto that the differences observed with the microscope, between the blood-corpuscles of man and those of lower animals, were too insignificant to admit of their diagnosis, or at least to justify their being used as a means of condemning a prisoner charged with murder. But Dr. Richardson asserts that with the aid of high powers of the microscope we may positively distinguish stains caused by human blood from those of the blood of the pig, ox, sheep, horse, goat, cat, and other animals, and this even when the stains are five years old. His assertion is sustained by practical tests of the most convincing character.

A $\frac{1}{7}$ objective was used in his observations, giving with the micrometer eye-piece an amplification of 3,700 diameters. When thus magnified the human red blood-disks appear about one inch and one-eighth in diameter, so that even slight differences in their size can be accurately measured. A series of measurements of human blood-globules in the fresh state showed but a slight difference compared with the same when dried. Thus the average size of the fresh corpuscles was $\frac{1}{3375}$ inch in diameter, while that of the dried was $\frac{1}{3152}$ of an inch. Moreover, it is shown that the smallest red disks of human blood, as usually

met with, are larger than the largest corpuscles of an ox or sheep. It should be borne in mind that ordinarily in criminal cases the microscopist is called upon to determine, not whether a particular specimen is human as distinguished from all other kinds of blood, but to discriminate simply between the blood-corpuscles of a man and an ox, a man and a horse, or a man and a sheep, and so establish or disprove the defendant's story as to how his clothing or other articles became stained with blood.

In replying to the arguments of opposing authorities, Dr. Richardson remarks: "All these theoretical considerations are of secondary importance in comparison with the positive fact as to whether practically we can or cannot discriminate the stains of human blood from those made by oxen or sheep." Therefore, in order to determine the point beyond cavil, he submitted the matter to a crucial test. His friends, Prof. J. Reese and Dr. S. Weir Mitchell, each prepared three packages of dried blood from an ox, a man, and a sheep. "The two series were simply numbered 1, 2, and 3, and a memorandum preserved by each gentleman, specifying which kind of blood composed each sample." The measurements of the corpuscles which were obtained in these several samples are given in tabular form. The inferences drawn from them are quite obvious, and fully confirm the truth of Dr. Richardson's statements.

To show that the age of the stains does not affect the accuracy of their diagnosis he examined a portion of a stain some five years old, and with a result quite as unmistakable as in the former experiments.

PAROTITIS, WITH TRANSLATION TO BRAIN AND TESTIS.—Dr. S. J. Radcliff reports a case of mumps which is interesting, from the rarity of its complications. The case was that of a young man, 27 years of age, who was attacked first by an ordinary idiopathic parotitis, which appeared to differ from other cases of the disease only in the severity of the symptoms. On the fourth day the right testis became inflamed, and the pain and swelling increased to an extreme degree. On the eighth day inflammation of both parotid and testis began to subside, and convalescence seemed progressing favorably; only the patient was wakeful and inclined to fret. Two days later, symptoms of marked cerebral excitement had developed; there was great restlessness, irritability, and a disposition to talk continually and upon a single subject. The pulse was 110, sharp and unsteady; eyes bright and staring, and pupils contracted. These symptoms continued several days, when decided delirium set in. The delirium was not of a violent character, but there was great mental excitement and evidences of commencing exhaustion. The diagnosis arrived at was that the patient "was laboring under a high state of meningeal excitement or hyperæmia, influencing the brain to increased functional activity, due to translation or operation of the materies morbi of the mumps." This condition lasted for upwards of a month. Then the symptoms gradually subsided, and in about three months the patient's faculties were so far restored, that he could partially resume his studies. The recovery was subsequently complete.

In connection with this case, the writer refers very fully to the literature of the subject. Cases of translation to the brain are shown to be exceedingly rare, and have usually terminated fatally. The pathogenesis of the affection remains obscure.—*Phila. Med. Times*, Aug. 15, 1874.

THE ACTION OF MODERN BULLETS ON THE ANIMAL BODY.—Dr. Augustus Küster, of the Augusta Hospital, has published in the last number of the *Berliner klinische Wochenschrift* an interesting paper on this subject. In a paper read last year before the German Surgical Congress, Prof. W. Busch, of Bonn, called attention to the fact that the Chassepôt bullet, when shot from a short distance into the human body, made a simple aperture of entrance, but that its aperture of exit was larger than a fist, and that there was very extensive fissuring and crushing of the bones. The same phenomenon had been described by Huy and Sarrazin in 1867; but they did not attempt to explain it. Dr. Busch supposed that the ball became melted and broken up by forcible contact with a hard substance, and acted like a mass of shot on the parts lying behind. Dr. Küster, at the time when Dr. Busch's paper was read, had made a similar observation as to the effect of the bullets, but could not adopt Dr. Busch's explanation. He had since made a number of experiments, which, with the courteous sanction of the ministry of war, who placed at his disposal arms, ammunition, and men, and with the assistance of Major Schenck, were carried out at the royal military school in Spandau.

In making the experiments a large target was placed behind the animals, so as to enable the condition of the bullets to be observed after their passage through the body. The distances were five, twenty, one hundred, and eight hundred paces. The arms used were a sporting rifle (muzzle-loader with pointed bullet), the needle-gun, Chassepôt, Mauser, and Henry-Martini rifles; the animals used for experiments were horses and wethers. The latter were first killed by a volley from all the weapons; then shots were discharged at the dead body, and after eight days a further series of experiments were made on the carcass, which was at that time undergoing decomposition. The following were the general results of the investigation:

1. There is no essential difference in the action of bullets on the living and on the dead body. With reference to this subject, Dr. Küster calls attention to the fact that, in consequence of the greater toughness and resistance of the skin of animals, the aperture of exit is not so large as in the human body. In one case the skin was so tough that the point only of the ball penetrated the skin of the back, and its force was then diminished. On dilating the opening and introducing the finger into the wound, there was found to be just as extensive destruction of the soft parts and bones as in the human body. It was only in those parts where the skin was thinner and lay close to the bones, as in various parts of the head of the bone, that it was sometimes torn to a greater extent, but never so much as in man. The extent of injury of bones, however, was not less than in the human subject.

2. The extent of the destruction is in inverse ratio to the distance, and in direct ratio with the initial velocity of the bullet. At eight hundred paces, although the characteristic peculiarities of the wound were still present, they were generally reduced in intensity. The smallest wounds were produced by the sporting rifle Jagdbüchse); the bullets, although put out of shape, remained entire in the body, even when discharged at short distances. Then followed the needle-gun, the Chassepôt, and the Mauser rifle, which produced frightful destruction of the bone and soft parts.

3. The destruction of the tissues is produced by the lead becoming heated by collision against a solid substance, and consequently broken up, but without being melted. The bullet is mechanically divided; it leaves the finest particles of lead in the recesses of the wound, while the fragments of larger size pass out along with pieces of shattered bone. On this point Dr. Küster differs from Professor Busch, who supposed a melting of

the lead to take place. Busch's view appears to derive confirmation from the fact, that when a lead bullet is discharged against an iron target, the lead is spread out in the form of a star; and this, it is argued, shows that it becomes melted. But Schädel, of Heidelberg, hung a small bag of powder before the target; the bag was repeatedly torn by the splinters of the bullet, but without producing an explosion, which must have taken place if the lead had been melted. There must also be a great difference, according to whether the bullet, travelling with full force, is completely arrested, or meets with an obstacle which it can overcome.

At the meeting of German naturalists in Wiesbaden, Professor Busch related some experiments to show that lead loses its cohesion in proportion as it is heated. If two bullets, one cold and the other heated, be allowed to fall on a stone from a height of six feet, no impression will be made on the first, while the second will be distinctly flattened. That a heating of the ball does take place is an evident result of the physical law, that whenever it meets with resistance a part of the force is changed into heat; and further, when a bullet remains sticking to the target it is always warm. Again, when a bullet is discharged from a short distance into a heap of moist sand, the edges and the further end of the channel made by the bullet are always warm. By these facts, the manner in which the injury is produced in the animal body is easily explained. The bullet shatters the first bony lamellæ with which it comes into contact, becomes heated, and is consequently broken into several fragments against the projecting portions and angles of the bone. In correspondence with this destruction of the bullet, the wounds made from short distances by the Chassepôt and Mauser, which have the greatest initial velocity, were frightful. Most of the bullets passed through the animals' bodies, reduced by one-half or more, and greatly altered, and made on the target an irregular impression, surrounded by a crown of small pieces of lead. Along with these were found fragments of bone, muscle, hair, etc. Dr. Küster does not remember having once seen a simple bullet-opening in the target.

The next point was to observe whether hardened balls have the same effect. This was *à priori* not improbable, as Pirogoff had noticed the remarkably extensive splintering produced by the copper bullets of the Tscherkesses. Dr. Küster, however, found that—

4. The injuries described are produced only by bullets of soft lead, not by those made of hard lead. Bullets of hard lead are used with one only of the modern weapons—the English Henry-Martini rifle. The hardness is produced by amalgamation of the lead with tin in the proportion of 12 to 1. The initial velocity of this rifle is nearly as great as that of the Mauser, and yet the wound produced by it is very much smaller. While with the latter the aperture of entrance into the bone was irregular, and very often extensively splintered, and while the amount of crushing increased in extent in the track of the ball, the Henry-Martini bullet always made a simple and more or less circular opening. If the edge of a rib were hit, the loss of bone formed the segment of a circle corresponding to the circumference of the ball. The aperture of exit was also generally roundish, though larger; there was either no splintering, or it was limited to the immediate circumference of the aperture. The hole in the target was without exception simple, and the ball, when found in the target, was not at all, or only slightly, misshapen. Dr. Küster has never found splinters of lead in the track of the wounds made by these bullets. In one case only did he find a bullet of this kind much misshapen; it had been discharged at a distance of one hundred paces, and remained sticking in a bone. Dr. Küster states, as a fact of importance, that at a distance of a hundred paces, the Henry-Martini bullets, with one exception, passed through the greatest diameter of the body of a horse, while the Manser bullets frequently remained in it. This is explained by the greater resistance which the latter have to overcome in consequence of the greater amount of misshapement which they undergo; it also shows that the passage of a ball right through the body generally indicates less danger than when it remains in it.

These results, Dr. Küster says, are capable of practical application in several directions. In the first place, they are a gain to forensic medicine. The statement made in text-books, that gunshot wounds are more extensive in the living body than in the dead, and that this affords a means of distinguishing whether the injury has been inflicted during life or after death, can no longer be tenable. No distinction exists in this respect, at least with the arms with which the experiments were made. On the other hand, a careful examination of the wound, especially when it passes through bone, may very well show whether the ball was of soft or hard lead, and allow some estimate to be made as to whether it came from a distance or was discharged near the part. A still greater gain, however, is to be derived by military surgery from the investigation. The opinions previously entertained as to the action of shot have been shaken by the introduction of the modern weapons, and require reform. In future, judging of the severity of an injury, it will be important to ascertain at what distance and from what weapon the shot was discharged, and whether it was of hard or of soft lead. The penetration of the bones of an extremity by a Chassepôt or a Mauser bullet at short distances will, in nearly all cases, demand immediate amputation.

Dr. Küster next refers to the bearing of the question on the interests of humanity. The use of explosive bullets of small calibre is forbidden by international agreement; but, if it be shown that bullets of soft lead, at least at short distances, act just like explosive bullets, and that a close combat with such bullets can be nothing but a horrible butchery, the members of the Geneva Convention must use every effort to obtain an international verdict against the use of them.

In some of the actions of the late war, when the combatants fought at short distances, the surgeons were struck with the frequency and severity of the injuries of the bones, and the size of the apertures of exit. At that time the reason of this was not understood, and it was supposed that explosive bullets were used. The researches of Dr. Busch and Dr. Küster have explained the matter; and Dr. Küster says that he owes it to a brave opponent to state with satisfaction, that the French stand thoroughly acquitted of the charge of having committed an act of unworthy and interdicted barbarity.—*Br. Med. Jour.*, 1874.

New Facts on Transfusion with Lambs' Blood.—At the recent Congress of the German Surgical Society several papers were presented on transfusion of blood. One by Dr. Kuester, of Berlin, another by Dr. Hasse, of Nordhausen, were read, and provoked interesting discussions. Dr. Kuester opposed the plan of using defibrinated blood, without giving specific reasons for so doing, and objected to Dr. Hasse's plan of conveying blood from the animal's artery directly into the vein of the patient. His reasons were (1), that there is danger of phlebitis or pyæmia from the clots,

etc., and (2) it is difficult to estimate the quantity of blood transfused. He gave the histories of eight patients on whom transfusion had been performed. The operation had been done thirteen times in all—in twelve with direct arterial transfusion, and in one by Hasse's method. The diseases were (1) gunshot fracture of the thigh, with waxy degeneration of the kidneys, (4) phthisis at a late stage, (1) phthisis with rectal fistulæ, (1) typhoid fever, with exhausting intestinal hemorrhages. The radial artery was used ten times, and the posterior tibial twice, in the other case the vein. Of these patients two only were living, the others survived from one to two weeks, and were often surprisingly improved, but at length yielded to their maladies. During the operation the symptoms were extraordinarily severe, chiefly from great pain in the sacral region and excessive dyspnœa. After the operation there was a sharp chill, followed by sweating; then the temperature rose to 103° F. on an average, but fell in from five to six hours to the normal. In favorable cases a general improvement commences at this time. The great dyspnœa was due, he thought, to the fact that the blood of ruminants contained such an abundance of carbonic acid that it is not oxidized with sufficient rapidity. In using human blood in a similar way, he had not met with dyspnœa, though more blood was transfused. A chill and rise of temperature followed, however, as with the blood of animals. On the whole, he preferred human blood. He believed that failure in many cases was due to the selection of improper cases, such as patients in the last stages of consumption. Dr. Hasse followed with a paper in which he advocated the use of his apparatus, and denied that the blood was more liable to coagulate in it than in any other. In regard to his method, he added the following particulars: It was imperatively necessary to drain the blood from a certain length of vessel, both in the artery of the animal and in the vein of the patient, and then to tie all collateral branches in two places, between which these branches should be severed. The peripheral end of the lamb's artery should then be securely tied, while light pressure was brought to bear on the central end. Digital compression was perhaps best; but a delicate pair of spring forceps might also be used with advantage. To close the central end of the patient's vein temporarily, he employed digital compression or a rubber ring. If this latter was slipped over the limb, it was easily adjusted and easily removed. A fold of the walls of the vessels was then raised with the vein forceps, and small portions were snipped out with curved scissors; the exposed portions of the vessels were then carefully cleansed, and the canula, previously filled with a solution of carbonate of soda (¼ per cent. in water), introduced. At this point care was requisite to prevent the ingress of air, but there was no great difficulty, with proper manipulation. Turning the cock, the arterial blood would flow rapidly into the patient's vein, driving before it the soda solution, and it could readily be seen through the glass tube if any air-bubbles entered. When a sufficient quantity of blood had passed, the rubber ring was slipped over the limb, effectually compressing the vein. The canula was then removed and allowed to discharge into a graduated vessel for a period of ten minutes, by which the quantity of blood transfused during the period of the operation was readily calculated. The final steps consisted in removing the intermediate portion of vein and closing the wound with sticking-plaster. Dr. Sanders remarked that he was well satisfied with Hasse's apparatus, having employed it eight times, and only had coagulation in one case. One of his patients had severe hæmaturia, but recovered after losing about ten pounds of flesh. Prof. Thiersch called attention to the fact that many lambs were sold in the market that were known to have chronic joint affections, and it was likely that their blood would be poisonous. Dr. Hasse, in reply to several points, said that a case of hæmaturia, mentioned by Prof. Hueter, followed indirect transfusion with human blood, and that in forty cases in which his direct method was employed, he had only six cases of hæmaturia, and those not of as severe character as the one above alluded to. In reference to the animal, he recommended the selection only of perfectly healthy lambs, not over eight weeks old. Old sheep were not suitable for this purpose. He further observed that the more carefully the operation was performed, the less often did hæmaturia or hæmaglobinuria (Ponfick) occur. This complication was not the result of transfusion from the lower animals, for it occurred, and with many times the severity, where defibrinated human blood was used. Dr. Heller, of Dantzic, has recently reported a case (*Berl. klin. Woch.*, 32, 1874) in which he operated by Hasse's method in cancer of the pylorus, but the patient died in five hours. Dr. Thurn (*Ibid.*) reports five cases in which he has tried what is virtually the same method. One of the patients, a consumptive, died at the end of four weeks, the others all did well. —*Berl. klin. Woch.*, 29, 31, 32, 1874.

Congestion and Apoplexy of the Kidneys and their Relation to Cerebral Hemorrhage.—Ollivier has performed a number of experiments to determine the nature of the changes that take place in the kidneys after cerebral hemorrhage. The results of his observations are as follows: The quantity of urine was found to be increased, and contained albumen, but the time of the appearance of albumen was not constant. Sugar was detected in some cases. The changes in the kidneys that followed the albuminuria were in all cases congestions; in one case ecchymosis beneath the capsule, and in another scattered apoplexies in the cortical substance. These changes in the kidneys were unilateral, either on the same or on the opposite side from the brain affections. In those cases where both hemispheres were involved, the congestion was more intense in that kidney which was on the opposite side from the hemisphere from which the hemorrhage first originated. With the exception of a single case, the hemorrhage always proceeded from the left hemisphere, and from the region lying about the fissure of Sylvius. The corpus striatum and optic thalamus were in each case either partly destroyed or almost entirely separated by the extravasated blood from the rest of the brain. The amount of blood which escaped was always large, and reached the crura cerebri on the anterior portion of the pons varolii; and when a circumscribed collection was found in the corpus striatum and optic thalamus, there were also other collections scattered throughout the crura cerebri or pons varolii. Ollivier believes that just at present we are not in a condition to determine with certainty, from the presence of albumen in the urine in these cases, that a definite point in the brain is affected. He believes, however, that, under such circumstances, where the symptoms indicating disease of the pons varolii are absent and albumen appears in the urine, it points to a hemorrhage either in the base of the brain or an extensive extravasation compressing it.—*Arch. Gén. de Med.*, Feb., 1874; *Med. Chir. Rundschau.*, July, 1874.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, October 1, 1874.

CONTAMINATED DRINKING-WATER.

THE occurrence of much sickness, and two or three cases of death, as the apparent result of drinking contaminated water at one of the fashionable hotels, has directed the attention of the profession and the public anew to an old subject. It is well, when such unfortunate results as those to which we refer take place, that we, as a profession, improve the opportunity to impress an important sanitary fact upon the community. Although every one must regret the circumstances which rendered investigation necessary, still, directing the attention of the public generally to the necessity of purity in drinking-water is always timely.

From the testimony of some physicians of this city who attended several of the guests of the hotel in question, it appears to us quite evident that to the impurity of the water used, all, or nearly all, of the blame is to be laid.

It appears that in the cellar of this hotel was a neglected cistern which had been covered up for a time. This circumstance, together with the fact that carcases of rats and decaying vegetable matter were found floating in the water, explains the reason why the contents became foul and very dangerous to health. This of itself was so direct a violation of the ordinary and fundamental principles of sanitary science, that it becomes difficult for us to understand how an intelligent manager could have allowed its existence at all, and especially in a building used as a first-class hotel, having a large patronage and claiming all the advantages which belong to a fashionable resort in one of the most charming and healthful regions of the country. However, it but shows how much is yet to be done in the way of educating the people on sanitary matters, and especially in impressing upon the minds of such as have the health of our families in their keeping the responsibilities which rightfully belong to the positions they occupy.

The condition of this neglected cistern was very bad, to begin with; but, worse than this, there appears to have been some connection with it and the pipes through which drinking-water was supplied to the guests. As soon as the water became infected sickness of a very significant character began to show itself among the inmates. Some were merely indisposed, while others were seized with all the symptoms which characterize septicæmia. Such at least is the testimony of some of the leading physicians of New York, who from the facts presented to them, and the symptoms of the patients under their direct observation, give it as their deliberate opinion that the drinking of contaminated water was the cause of the sickness.

Of course, as soon as the difficulty was discovered, every means were taken to remedy it, but, alas! too late for some, who have since died. It is well, however, that the cause of all the trouble was found out at last, and it is equally fortunate that the subject has, in connection with the hotel in question, been forced upon the serious attention of the public at large. It is a matter, presented as it has been through the columns of the daily press, which every one can now understand, and understanding can appreciate the necessity for guarding against any similar negligence in future, as much in the capacity of housekeepers as in that of hotel proprietors.

The importance of having a good supply of pure water is so impressed upon the managers of the aqueducts supplying large cities, that extraordinary care is taken to prevent contamination. If this were not so, we should at short intervals have a widespread epidemic of typhoid symptoms, with all the attendant phenomena now so well recognized as due to such septic influences. In isolated localities, however, where each individual, or set of individuals, depends upon their respective sources of water supply, the case assumes quite a different aspect. The lakes, springs, or wells very often become the receptacles of poison, which soon sacrifices precious lives. There is hardly a physician who has practised in localities in which each inhabitant has an independent water supply, who has not been able to trace many anomalous, dangerous, if not fatal symptoms, to this latter source. Old wells are particularly dangerous in this respect, unless they are far enough removed from sewers to make infection impossible from these, or from a saturation of the surrounding soil with sewage of any kind.

We knew of an old physician who was so thoroughly impressed with the fact that bad drinking-water produced dangerous disease, that he always inquired particularly of the character and sources of the supply. This was evidently a hobby; but we are convinced that his investigations in this re-

spect were not only perfectly reasonable, but eminently judicious. As practising physicians we all agree in the importance of such inquiries, but we fear that very few look into the matter with that thoroughness which, in a sanitary point of view, it so justly demands. Let us therefore take another lesson on the subject, impress ourselves with its great importance, and be ever ready to utilize our knowledge in the cause of preventive medicine.

CONCERNING VIVISECTION.

AGAIN, as a profession, we are called upon to defend the utility of vivisections. The president of the Society for the Prevention of Cruelty to Animals, after having apparently exhausted every other topic bearing upon his famous specialty, has made a little departure. No one wonders at his efforts to magnify his office as custodian of the humanities, or as the champion of those extreme sympathies which are fostered by enthusiastic humanitarians. No one can blame him for feeling the responsibilities which are thrust upon him by a community who are so indifferent to the claims of the brute creation; and all right-minded and unprejudiced individuals are ever ready to thank him for reminding them of the fact that the same God that made man made the brute. There is a great deal of poetry in all this, which we believe the public at large are willing to offset against the sterner and more practical business of life which forces itself upon unromantic and plodding routinists. When we are informed that calves should go to the slaughter standing; that cattle should be butchered only in a certain way; that hydrophobic dogs should have all the rights of execution to which as friends of man they are entitled; that turtles should not lie uncomfortably upon their backs, or that oysters should not be swallowed alive, our sympathies are awakened, and we are quite ready to do our duties in the premises. We are hardly ready to cry over the misfortunes of the brute, as this may give a ridiculous aspect to our enthusiasm; but are willing to be humane, and the champion of animal rights gains his legitimate victory. On general principles no one is hurt, and the brute community are benefited. So long as this is the case no one can complain; every one is satisfied, and the lower creation have their claims allowed.

If there is a ludicrous element in this struggle for animal rights we in charity overlook it, at least so long as no important interests are assailed. No one loses anything by this stimulation of sympathetic feeling, provided it does not overleap the bounds of ordinary common sense, or militate directly against the necessities and utilities of a higher humanity. The latter is the case when Vivisection is assailed on the score of cruelty. So far, however, as the charge of cruelty is concerned, it can only be conscientiously made in ignorance of the manner in which vivisections are performed. It is well known to the profession that all operations, with very few exceptions, are performed under ether, the animal suffering no pain whatever, and in fact no other inconvenience than that attending the mere taking of the anæsthetic. It is very easy to raise a sensation upon the subject when it is presented in a certain light, and so far such sensations keep alive an interest in the Society, which, from a business point of view, is very proper; but when the vast interests of medical science are threatened by such action, and there is the possibility of the passage of a law hindering scientific investigation by their means, we are forced to look upon the matter in a very serious light. Eight years ago there was an effort made by Mr. Bergh to secure the passage of such a law, and its defeat was secured only by the timely and convincing arguments of Prof. Dalton, made before the State Medical Society, and afterwards transmitted, with the unqualified endorsement of that body, to the legislature. We believe that there is a promise of a repetition of the same effort, and in that view it is well that the attention of the profession should be directed again to the subject in order to take a proper defensive stand. We can no more afford to favor the discontinuance of vivisection than we can to argue against the utility of dissection—if we are willing to admit the former practice as unnecessarily cruel, we must likewise acknowledge that the latter is sacrilegious.

To the successful and continued cultivation of experimental physiology we owe some of the most remarkable, useful and brilliant discoveries in scientific medicine, and these discoveries could have been made in no other way than by vivisection. Without experiments upon living animals we should still be in ignorance of the circulation of the blood, the nature and mechanism of respiration, the formations of different parts of the nervous system, the distinction made by Sir Charles Bell between the fifth pair and facial nerves, the operation of transfusion of blood, the mechanism of artificial respiration, the treatment of serpent bites, and the separation of bone from the periosteum. Besides these discoveries we make no mention of others of less importance. Nor only have discoveries been made, but by means of vivisection we are constantly increasing our range of observation, improving our methods of investigation, and preparing the way for still more brilliant and satisfactory results.

When it is proved by the most enthusiastic advocates of animal protection that experimental physiologists are barbarous, unreasonable, and cruel; that they do not take every means in their power to mitigate suffering; that the discoveries yet to be made can be possible by other means than vivisection, then we shall be prepared to say that Mr. Bergh is right and that the profession is wrong.

Reviews and Notices of Books.

MATERIA MEDICA FOR THE USE OF STUDENTS. By JOHN B. BIDDLE, M.D., Prof. Materia Medica and Medical Jurisprudence, Jefferson Medical College. Sixth Edition, Revised and Enlarged. With Illustrations. Philadelphia: Lindsay & Blakiston. 1870. 8vo, pp. 434.

THE profession generally are very well acquainted with the merits of this work, and have attested its particular adaptation to their wants by calling for successive editions. As a whole, it is a good book for the general student, presenting in an intelligible, succinct, and practical manner the value of the different articles of the materia medica. Some fault may be found with the arrangements of the subjects, and some dissension from the views of the author in regard to the therapeutic action of some of those remedies most in use; but these objections are more than outweighed by other notable features of the work. This sixth edition has evidently been revised with much care, and keeps up the reputation of the work.

LACERATION OF THE FEMALE PERINÆUM AND VESICO-VAGINAL FISTULA: Their History and Treatment. By D. HAYES AGNEW, M.D. Philadelphia: Lindsay & Blakiston. 1873.

IN a short introduction the author states that applications constantly received for the Pennsylvania Hosp. Reports and the *Medical and Surgical Reporter*, in which papers the subjects of his book appeared several years ago, induced him to place them before the profession in their present form. But even without such an incentive a treatise on so important lesions as lacerations of the perinæum and vesico-vaginal fistula, which cause so much annoyance and distress to the patient, and which, during the recent years, excited considerable interest among the profession, would have been welcomed both by the gynæcologist and the general practitioner.

The first part of the book is devoted to the history and treatment of lacerations of the perinæum. Dr. Agnew wastes no words, but gives in clear and concise language, successively, the anatomy of the parts concerned, the causes, results, and treatment of these lesions. With regard to the time of and the contra-indications to the operation, he furnishes important hints.

His mode of operating does not materially differ from that of many others, except in the manner of inserting the first suture, by which the independent closure of the septum becomes superfluous. The author believes that the division of the sphincter ani, as practised by J. Baker Brown, is not necessary to a cure, and that superficial sutures may be dispensed with. In support of this, he gives the history of several cases, all of which terminated favorably.

The subject of the second part of the book is Vesico-vaginal Fistula. Here, as in the first part, Dr. Agnew commences with the history of the disease, next enumerates its causes, etc., and finally describes the different methods of operating, as performed by Dr. Marion Sims, N. Bozeman, J. H. Simpson, J. Baker Brown, and others. But, strangely, the method of Dr. G. Simon, of Heidelberg, finds no mention, although he has been most successful in the operation of vesico-vaginal fistula, and as Prof. G. Thomas, in his treatise on diseases of women very properly remarks, has labored more earnestly and achieved more for it, with the exception of Dr. Marion Sims, than any one else.

Further on, the author states his own plan of treatment, for which he claims nothing original, and which is in all essential points the same as that of the gentlemen referred to above. The different steps of the operation are clearly described, also the after-treatment and removal of the sutures. The causes of failure and the sequels of the operation are briefly explained, and the closing pages of the volume contain the report of a number of interesting cases treated by the author, which altogether makes the book a most desirable addition to any physician's library.

A STUDY UPON MENSTRUATION FROM THE POINT OF VIEW OF ITS INFLUENCE UPON CUTANEOUS DISEASES. (ÉTUDE SUR LA MENSTRUATION AU POINT DE VUE DE SON INFLUENCE SUR LES MALADIES CUTANÉES.) Par H. DANLOS. Paris, 1874.

IN this well-written little brochure the author alludes to the fact that the subject under consideration has not till now been treated of in a systematic manner, and he alludes to its importance. He studies the question as influenced by the epoch of puberty, during the period of sexual life, and at the age of the menopause, and arrives at the following conclusions:

There is an evident sympathy between the utero-ovarian apparatus and the tegumentary system. This sympathy shows itself either by eruptions of which the evolution coincides with the menstrual epochs, or with the development of uterine disturbances, or by the disappearance of a morbid condition of the skin at the establishment of puberty or when dysmenorrhœal troubles cease.

In order to explain this, we may consider that cutaneous affections have, by tendency to urticaria, by their hyperæsthesic (herpetides), or neuralgic (zona), or anæsthetic (leproid), character, a certain analogy with nervous affections; and that of all the organic systems of the economy the nervous system is the one which receives the *contre-coup* of uterine troubles (hysteria). Thus we would be led to regard cutaneous manifestations due to menstruation or its disorders, as reflex neuroses.

It is well to add that this sympathy is not evident in all patients, and that we only observe them, at least in a high degree, in quite a limited number. He cites some apposite cases of eczema, erysipelas, pemphigus, acne, scleroderma purpura, and melanoderma; but still some of his cases are unsatisfactory. Though hardly appropriate to his subject, he details a case of interest. It was that of a woman who, at the early part of one period of lactation, developed a pemphigoid eruption, and in a subsequent pregnancy again manifested the same lesion. This affection has recently been called herpes gestationes.

ON CARDIAC LESIONS IN FACIAL ERYSIPELAS. (DES MANIFESTATIONS CARDIAQUES DANS L'ÉRYSIPELE DE LA FACE. By Dr. A. SEVESTRE. Paris: A. Delahaye. 1874.

THE author alludes in his introductory chapter to the importance of the study of the visceral lesions which occur during the course of the essential fevers, and also to the fact that during the course of facial erysipelas the heart has seldom been examined. Indeed the bibliography of the subject is as yet very scant. The author pays a grateful tribute to Dr. Jaccoud, of Paris, and states that it was this eminent physician who first called his attention to these lesions, which he has studied with great care. The result is a small, well-written *brochure*, which at the end contains the author's conclusions very succinctly stated. They are as follow:

1. That during the course of facial erysipelas we may observe troubles of the heart. These manifesta-

tions, without being very frequent, are so much so that they cannot be regarded as coincidences. They are of two kinds: sometimes consisting of lesion of the endocardium, more rarely the pericardium; sometimes it consists of a myocarditis.

2. Endocarditis develops itself at the *début* of the erysipelas; it can be developed at its termination; but in the greatest number of cases it appears while the cutaneous eruption is in an active condition. Its duration is variable, disappearing ordinarily nearly at the same time as the erysipelas, sometimes before it, and it may leave a permanent lesion. Pericarditis is more rare. It is ordinarily of a dry character and limited in extent, and is scarcely ever observed except when associated with endocarditis. Sometimes the endocarditis is the sole lesion. Cases of pericarditis with effusion are almost exceptional.

3. Myocarditis and fatty degeneration of the muscular fibres of the heart may be observed in erysipelas, as also in variola, typhoid fever, and other similar affections.

4. The cardiac lesions in erysipelas (endocarditis as well as myocarditis) are not in connection with the cutaneous lesions, but they arise, as do the latter, from the general disturbance of the organism. The knowledge of these lesions confirms the comparison which can be established between erysipelas as the infectious diseases.

The author alludes to the fact that we find visceral lesions after burns, and also after some general eruptions, which are probably due to reflex influence; but he thinks, as he says in his conclusion, that this feature does not obtain in the affection under consideration.

A CONTRIBUTION TO THE STUDY OF THE NECROSIS CAUSED BY PHOSPHORUS. (CONTRIBUTION À L'ÉTUDE DE LA NECROSE DE CAUSE PHOSPHORÉE.) Par Dr. A. JAGU. Paris: A. Delahaye. 1874.

THE author of this excellent little brochure runs rapidly over the list of authors who have from time to time written on this subject, and while he accords them the respective merits of their works, he thinks he also, from his observation, can contribute somewhat to general knowledge. His attention was drawn to the subject by the death of a patient in whom the necrosis had extended to the base of the skull, and who also presented the visceral lesions peculiar to phosphorus poisoning. As an attest of the value of the work it is well to state that it has been written under the suggestion and with the kindly assistance of the celebrated French surgeon M. Verneuil. The work is essentially a clinical study, and the author has appended to it a series of aphorisms, which we quote, which give a better idea of the contents of the book than an analytical review would do. These conclusions are as follow:

1. Necrosis can, in extending to the cranial bones, invade successively the malar, palatine, and turbinated bones, vomer, ethmoid, and temporal, and even the occipital bones, necessarily inducing death, and giving rise to symptoms varying with the organs which are attacked.

2. The principal causes of this extension should be attributed to the prolonged presence of necrosed bone in the tissues, and to a failure of the free discharge of pus.

3. In individuals subjected to phosphorous vapors, and afflicted with necrosis, the propagation of the osteoperiosteal inflammation is by means of continuity.

4. The eliminating process of the bone entrains of necessity an arrest of the morbid process.

5. The rapid course of the phosphoric osteo-periostitis, and its well-marked extension, is inimical very often, especially by its consequent profuse suppuration, to the process of bony regeneration.

6. Prolonged bony suppuration, and the digestive disorders which they entrain, induce death by producing visceral lesions, such as amyloid and fatty degeneration of the viscera.

7. Every instance of fatty degeneration in this disease should not be attributed to phosphorus.

8. Except in certain peculiar cases, but very rare ones, in which no expectant course can be pursued, the surgeon should in a general manner consider as urgent and necessary surgical intervention before the sequestrum becomes movable, as the necrosis is rapid and extensive, and the general condition rapidly deteriorates. This intervention should be guided by the special indications of each case. The author gives an excellent lithograph of a skull, the base of which was extensively involved. He also details the case fully.

UPON URINARY FEVER. (DE LA FIÈVRE DANS LES MALADIES DES VOIES URINAIRES.) By Dr. ALBERT MALHERBE. Paris, 1873.

THERE is certainly no more interesting, and though, unfortunately, not very clearly understood, subject in the range of pathology than the one treated of in this brochure. The author has, under the guidance of M. Guyon, of the Necker Hospital, Paris, carefully followed up a large number of cases of genito-urinary diseases, of which he gives histories; and deducing from them their salient points, has arrived at the following conclusions regarding the subject:

1. We observe during the course of diseases of the urinary organs, and after operations upon them, certain febrile conditions which have been termed uræmic fever. This fever, always serious, may rapidly induce death.

2. Uræmic fever manifests itself under two forms: the acute form, with distinct severe invasions, but irregular in their duration and apparition; the mild form, in which remittance in type is noticed. It can be complicated with certain phlegmasiæ, periarticular, articular, or diffuse, in the intermuscular connective tissue of the limbs. These phlegmasiæ frequently suppurate even when they involve the articulations. They are grave in character.

3. Uræmic fever appears always to be the manifestation of an ephemeral or permanent lesion of the kidney, which produces, as a consequence, a profound disturbance of the urinary secretion, and, as a result, the retention of urinary ingredients in the blood.

4. The lesion of the kidney may be either a simple congestion or an interstitial nephritis.

5. The interstitial nephritis which complicates urinary diseases may terminate either in suppuration or in atrophy of the kidney.

6. The symptoms of this fever are of two kinds: the reactional symptoms, due to the renal inflammation; the symptoms of intoxication, due to the retention of excrementitious materials of the urine.

7. The principal therapeutic agents to combat this fever are sudorifics and alcohol; locally, dry cups to the kidneys. Sulphate of quinine is far from meriting the reputation which it enjoys in the treatment of urinary fever.

8. Surgical interference is limited to the cases where there is stagnation or retention of urine. The re-establishment of the flow of urine by means appropriate to the nature of the trouble is the leading indication.

The work is clearly written, and is certainly an honest attempt to explain rationally the peculiar combination of symptoms by their causes, their course, and by an examination of the lesions which they leave after them.

ARTICLES IN OUR EXCHANGES.

PATHOLOGY AND PRACTICE OF MEDICINE.

Treatment of snake bites by subcutaneous injection of liq. ammon. caust. KLEINSCHMIDT. *Ibid.*, 24.

Theory of aphasia. SCHREIBER. *Ibid.*, 26, 27.

The formation of combustible gases in the stomach. SCHULTZE. *Ibid.*, 27.

Poisoning by illuminating gas. JACOBS. *Ibid.*

Official report on the cholera in Vienna, in 1873. INNHAUSER. *Allg. Wien. Med. Ztg.*, 20, 21, 1874.

Sixteen thousand cases of diseases of the nerves, chest, and larynx. FIEBER. *Ibid.*, 20, 21, 24, 25.

General electrization and central galvanism. VATER. *Ibid.*, 21, 22, 23, 24, 25.

Case of tabes dorsalis complicated with atrophy of the left sympathetic with epileptic seizures. CHVOSTEK. *Ibid.*, 23, 24, 25.

A case of repeated hemorrhage from the kidneys, connected each time with exposure to cold of the general integument. SOCOLOFF. *Berl. klin. Wochenschr.*, 20, 1874.

Putrid poison, the bacteria, putrid infection or intoxication, and septicæmia. PANUM. *Virchow's Archiv*, lx., 3 and 4, 1874.

Coccobacteria septica in the bodies of healthy vertebrates. TIEGEL. *Ibid.*

The spider and brush-celled glioma. SIMON. *Ibid.*

The tympanitic and non-tympanitic percussion sound. KLUG. *Ibid.*

Appearance of great quantities of hæmatoidin crystals in the sputa. SCHULTZE. *Ibid.*

Typhus exanthematicus (typhus fever) and febricula, especially in childhood. BEHSE. *Dorpat Med. Zeitschr.*, 1, 2, 1874.

Perforating ulcer of the stomach. BOETTCHER. *Ibid.*

Contribution to the subject of cancer. MEISSNER. *Schmidt's Jahrb.*, 1, 1874.

On the theory of tuberculosis. AUFRECHT. *Ibid.*, 6, 1874.

Report on typhus (typhoid and typhus fevers). GEISSLER. *Ibid.*, 2, 1874.

The treatment of acute rheumatism by fixation of the limbs. OEHME. *Archiv der Heilkde.*, 5, 1873.

Injury to the head, with consecutive diabetis mellitus. KAEMNITZ. *Ibid.*

Clinical and anatomical considerations on the "desmoid carcinoma." SCHULZ. *Ibid.*, 3 and 4, 1874.

Cases of multiple sarcoma. HUGUENNI. *Ibid.*, 3, 4, 1874.

Pathology of the new formations of dentine in the pulp. BLUME. *Deutsch. Vierteljahrsschr. f. Zahnhlkde.*, Jan., 1874.

Malformed teeth. BAUME. *Ibid.*

Formation of combustible gases in the stomach. SCHULTZE. *Berl. klin. Woch.*, 28, 1874.

Singultus of almost four weeks' duration as the commencement of carcinoma of the stomach. EYSELEIN. *Ibid.*, 30, 1874.

Tuberculosis of the brain. KARRER. *Ibid.*, 31, 1874.

Two cases of echinococcus. BREGGEN. *Ibid.*

Case of endocarditis ulcerosa, with micrococcal embolism. EISENLOHR., *Ibid.*, 32, 1874.

Cheyne-Stokes's respiratory phenomenon. FILEHNE. *Ibid.*, 33, 1874.

Case of tabes dorsalis complicated with atrophy of the left sympathetic and epileptic seizures. CHVOSTEK. *Allg. Wien. Med. Ztg.*, 26, 27, 1874.

Aneurism of the ascending and transverse portions of the aorta. *Lo Sperimentale*, May, 1874.

Case of spina bifida. ABELIN. *Hygeia*, Stockholm, April, 1874.

Latent typhoid infection. OTTOLENGHI. *Giorn. d. Med. Farm. e Veter.*, April, 1874.

Treatment of diphtheria. BERTONE. *La Nuova L'g. Med.*, May, 1874.

Sarcoma of the optic thalami and tubercula quadrigemina. RUSCONI. *Ann. Univ. di Med.*, May, 1874.

Morbific elements, experimental pathology, and the basis of the science of medicine. BETTI. *Lo Sperimentale*, June, 1874.

Oxalic acid in diphtheria. CENNI. *L'Independente*, May, 1874.

Epidemic cerebro-spinal meningitis. AMOROSO. *Il Morgagni*, April, 1874.

Typhus fever. TOMMASI. *Ibid.*

Ferments and their action on the animal organism. HAMMARSTEN. *Ugeskrift f. Laeg.*, 22, 23, 1874.

Yellow fever in Rio de Janeiro in 1873. *Gaz. Med. da Bahia*, March and April, 1874.

Palustral fevers. *Ibid.*

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Prolapse of the womb in seventh month of pregnancy. KAUT. *Med. Corr.-Blatt.*, xliv., 21.

Peculiar effect of the cholera-poison upon the bodily temperature. ZUELZER. *Berl. klin. Wochensc.*, 14, 1874.

On extraction after cephalotripsy. HUBER. *Ibid.*, 15.

Influence upon the fœtus of chloroform-anæsthesia of parturient women. ZWEIFEL. *Ibid.*, 21.

Cases of diverticulum Meckelii. RIEFKOHL. *Ibid.*

Incision of an ovarian cyst grown firmly adherent to abdominal wall and womb, with rinsing of the cavity continued until recovery. MARTIN. *Ibid.*, 24.

Operations performed from 1871-73 at the obstetrical polyclinic in Königsberg. BLUHM. *Ibid.*, 25.

The pain in the intervals of menstruation. COHEN. *Allg. Med. Cent.-Ztg.*, 42, 1874.

The boundaries of the congestive abscesses in the spondylarthrocace of children. SOLTMANN. *Jahrb. f. Kinderhlkde.*, vii., 3.

Multiple fistulæ of the thorax. WITTMANN. *Ibid.*

Periosteal abscess on the right leg. *Ibid.*

Statistics of croupous pneumonia, particularly in childhood. JURASZ. *Berl. klin. Wochensch.*, 17, 1874.

Aphasia in children. ALBRECHT. *Jahrb. f. Kinderhlkde.*, vii., 4.

The stated typical course of rachitis. DEGNER. *Ibid.*

Treatment of diphtheritis and scarlatina. MAYER. *Ibid.*

New investigations, and clinical observations on human and cow's milk as food for children. BIEDERT. *Virchow's Archiv*, lx., 3, 4, 1874.

New investigations on whooping-cough, and the development of the whooping-cough parasite. LETZERICH. *Ibid.*

A rare case of cavernous fibroid of the uterus. LEOPOLD. *Arch. der Heilkde.*, 5, 1873.

Changes in the rubber nipples of nursing bottles. METTENHEIMER. *Memorabilien*, 3, 1874.

Aphasia in children. CLARUS. *Jahrb. f. Kinderhlkde.*, vii., 10, 1874.

Apparently typical course of rickets. DEGNER. *Ibid.*

Treatment of diphtheria and scarlatina. MAYER. *Ibid.*

Prurigo in children and in adults. KLEMM. *Ibid.*

A new intra-uterine pessary. HARTWIG. *Berl. klin. Woch.*, 29, 1874.

Hæmatometra as a result of bifid uterus—one-half not communicating with the vagina. NICOLAYSEN. *Nord. Med. Ark.*, vi., 1, 1874.

Anæsthesia in obstetrics. ROMITI. *Lo Sperimentale*, May, 1874.

Puerperal insanity. HOLM. *Hospitals Tidende*, 15, 16, 17, 18, 1874.

Profuse hemorrhage from uterine polyps. CARRATI. *Gaz. del Clin.*, May, 1874.

Ovariotomy. PORRO. *Gazz. Med. Ital. Lomb.*, May, 1874.

Uterine polypi removed by the elastic ligature. BELLI. *Il. Raccogl. Med.*, May, 1874.

Constipation in infants. STAGE. *Ugeskrift f. Laeg.*, 19, 1874.

Hæmatoma extravaginale. INGERSLEV. *Ibid.*, 25, 1874.

SYPHILIS AND DERMATOLOGY.

Varicella. HENOCK. *Berl. klin. Wochenschr.*, 18, 1874.

Pathogenesis and mechanical therapeutics of variola. ZUELZER. *Ibid.*, 25.

A rare form of nævus. GEBER. *Vierteljahrsc. f. Derm. u. Syph.*, i., 1.

Acne from bromide of potassium. VEIEL. *Ibid.*

Pathology of syphilitic affections of the nervous system. REDER. 2 lith. plates. *Ibid.*

The inflammatory papilloma of the skin. WEIL. *Ibid.*

Two interesting cases of Variola. KRAMER. *Ibid.*

Treatment of gonorrhœa with tannin and glycerine paste. SCHUSTER. *Ibid.*

The so-called psoriasis syphilitica. DUHRING. *Ibid.*

On the present aspect of the doctrine of the etiological relations of minute organisms to infectious diseases. KAPOSI. *Ibid.*

Morbilli bullosi sive pemphigoidei. STEINER. *Jahrb. f. Kinderhlkde.*, vii., 3.

Acute invasion of status mucosum of the skin, with fungus extending from an onychomycosis. HILLER. *Berl. klin. Wochensch.*, 17, 1874.

Relation of varicella to variola. SENATOR. *Jahrb. f. Kinderhlkde.*, vii., 4.

Prurigo of children. KLEMM. *Ibid.*

New views, observations, and experiences on the former method of vaccination, and the protective power of real vaccine lymph. GRÜLL. *Virchow's Archiv*, lxi. 1, 1874.

Case of purulent inflammation of the joints in variola. HOHENHAUSEN. *Dorpat Med. Zeitschr.*, 2, 1874.

Infection of persons with herpes from an animal having herpes and scabies. (Continuation of articles in Nos. 11 and 12.) MICHELSON. *Ibid.*, 33, 1874.

Cases of Norwegian scabies. BERGH. *Hospitals Tidende*, 20, 1874.

Syphilis and multiform erythema. OEDMUSSON. *Nord. Med. Ark.*, vi., 1, 1874.

Seven years of syphilitic practice. TURATÍ. *Ann. Univ. d. Med.*, May, 1874.

Report on spedalsked (elephantiasis Græcorum) in the Lungegaards hospital, 1871–3.) DANIELSSEN. *Norsk. Mag. f. Laeg.*, June, 1874.

Relation of variola and varicella. SENATOR. *Jahrb. f. Kinderhlkde.*, vii., 4, 1874.

OPHTHALMOLOGY AND OTOLOGY.

The accommodation and anomalies of accommodation of the ear. LUCAE. *Berl. klin. Wochenschr.*, 16, 17, 1877.

Statistics regarding the blind. KATZ. *Ibid.*, 23, 24.

Cause of hemiopia. ILLING. *Allg. Wien. Med. Ztg.*, 23, 24, 25.

Pathology and diagnosis of orbital tumors. OETTINGEN. *Klin. Monatsbl. f. Augenhlkde.*, Feb. and March, 1874.

Healing of crystalline lens with a piece of steel in it, and vision preserved. ARLT. *Ibid.*

Three cases of hereditary affections of optic nerve. ALEXANDER. *Ibid.*

Case of correctopia. *Ibidem.*

Methods of operating for corneal staphyloma. VIDOR. *Jahrb. f. Kinderhlkde.*, vii., 4.

On the question of the curative effect of tenotomy of the musculus tensor tympani. WEBER-LIEL. *Monatssc. f. Ohrenhlkde.*, viii., 6.

Perforation of the membrana tympani. VOLTOLINI. *Ibid.*

Perforations of the mastoid process. BEZOLD. *Ibid.*

The theory of serous cysts of the iris. HOSCH. *Klin. Monatsbl. f. Augenhlkde.* April, May, 1874.

Facts about serous cysts of the iris. SATTLER. *Ibid.*

Nutrition of the lens. ZEHENDER. *Ibid.*

Hemiopia in cerebral disease. COHN. *Ibid.*, June, July, 1874.

Blepharoplasty. SIKLÓSY. *Ibid.*

Some subjective phenomena during increased intra-ocular pressure. REICH. *Ibid.*

Desquamative inflammation of the middle ear. WENDT. *Arch. d. Heikde.*, 5, 1873.

New operation for staphyloma of the cornea. VIDOR. *Jahrb. f. Kinderhlkde.*, vii., 3, 1874.

On the perception of color. SCHOEN. *Berl. klin. Woch.*, 29, 30, 1874.

Keratomalacia after measles. BEZOLD. *Ibid.*, 33, 1874.

Cases of skin transplantation in eye practice. ILLING. *Allg. Wien. Med. Ztg.*, 32, 1874.

Reflex nervous phenomena in ear diseases. GIORNINI. *Il. Raccogl. Med.*, May, 1874.

MATERIA MEDICA, THERAPEUTICS, AND TOXICOLOGY.

Local treatment of diphtheria. MUNCHMEYER. *Berl. klin. Wochenschr.*, 21, 1874.

Action of certain drugs upon the cerebral vessels. SCHÜLLER. *Ibid.*, 25, 26.

The skin as a medium for the application of remedies. ROEHRIG. *Jahrb. f. Kinderhlkde.*, vii., 3.

Tetanus in a child cured by extract calaberis. JARISCH. *Ibid.*, 4.

Investigations in the physiological actions of the ergotin of Bonjean, and the ergotin of Wiggers. KOEHLER. *Virchow's Archiv*, lx., 3 and 4, 1874.

Experiments on the action of alcohol in fever. STRASSBURG. *Ibid.*

Decomposition of iodide of potash within the body. KAEMMERER. *Ibid.*

Poisoning with cow-bane. TROJANOWSKY. *Dorpat Med. Zeitschr.*, 3, 1874.

Treatment of diphtheria with the neutral sulphate of magnesia. SCHOTTIN. *Archiv d. Heilkde.*, 3 and 4, 1874.

Poisoning with vanilla cream. FERBER. *Ibid.*

Therapeutical use of the iron and manganese in mineral waters. RITTER. *Med. Corr.-Blatt.*, 26, 1874.

Tincture of eucalyptus globulus in malarial fever. HIRSCH. *Berl. klin. Woch.*, 30, 1874.

Chemical examination of the air in rooms where the paper contained arsenic in some form. HAMBERG. *Nord. Med. Ark.*, vi., 1, 1874.

Morbid effects from the odor of the walnut. FINAMORI. *La. Comp. Med.*, May, 1874.

MISCELLANEOUS.

Studies in the history of medicine. RITTMANN. *Allg. Wein. Med. Ztg.*, 21, 23, 24.

Medicine in Spain. ULLERSPERGER. *Virchow's Archiv*, lx., 3 and 4, 1874.

Report on the recent advances in veterinary science. FALKE. *Schmidt's Jahrb.*, 3, 1874.

Report on the recent advances in balneology. FLECHSIG. *Ibid.*

Proposal for a systematic method of examining the physiological action of cold, lukewarm, and warm-water baths. PETERS. *Archiv d. Heilkde.*, 5, 1873.

The sanitary regulations of the Prussian state, especially in reference to cholera. SILBERSCHLAG. *Deutsche Vierteljahrsschr. f. öffentl. Gesundheitspf.*, 2, 1874.

The erection of local sanitary offices. LIÉVIN. *Ibid.*

Reform of the Prussian medical system. LION, sr. *Ibid.*

Decrease in the mortality of Munich from typhoid

—drinking-water as the cause of the disease. PETTENKOFER. *Ibid.*

Sanitary condition of the island of Heligoland. SANDER. *Ibid.*

Selections of material for street embankments. MUELLER. *Ibid.*

The trichina disease in American hams. ROEPER. *Ibid.*

A cheap pneumatic apparatus. BIEDERT. *Berl. klin. Woch.*, 29, 1874.

Value of Waldenburg's pneumatic apparatus. SOMMERBRODT. *Ibid.*, 31, 1874.

Report on typhoid fever in Sarpsborg in 1871, and the locality of the disease of late in Norway. BOECK. *Norsk Mag. for Laegevidenskaben*, May, 1874.

Chemical examinations of the air in rooms. HAMBERG. *Nord. Med. Ark.*, vi., 1, 1874.

NERVOUS DISEASES.

Case of progressive paralysis of the hypoglossal (bulbär paralyse). MAIER. *Virchow's Archiv*, lxi., i., 1874.

Chorea major and minor. WENZEL. *Schmidt's Jahrb.*, 5, 1874.

Some relations between secondary degeneration and the processes of development in the human spinal cord. FLECHSIG. *Archiv d. Heilkde.*, 5, 1873.

Lyssa humana. EMMINGHAUS. *Ibid.*, 3 and 4, 1874.

Significance of the dread of personal injury. ZENKER. *Der Irrenfreund*, 3, 1874.

Centres of motor nerve force in the cortex of the anterior central convolutions of man. STARK. *Berl. klin. Woch.*, 33, 1874.

General electrization and central galvanization. ARTENS. *Allg. Wien. Med. Ztg.*, 27, 28, 29, 31, 1874.

Disturbances of innervation in the cervical portion of the sympathetic. BRUENNICHE. *Hospitals Tidende*, 19, 1874.

Pathogenesis and treatment of aphasia. PIERANTONI. *Il Raccogl. Med.*, April, 1874.

Case of essential tremors. BURRESI. *Lo Sperimentale*, May, 1874.

Effect of large doses of the alcoholic extract of nux vomica on acute and chronic nervous diseases. STEFANI. *Lo Sperimentale*, May, June, 1874.

Pseudo-hypertrophic muscular paresis. BRANNICHE. *Hospitals Tidende.*, 17, 1874.

Therapeutical electrolysis. CINISELLI. *Il galvani*, April, 1874.

ANATOMY AND PHYSIOLOGY.

Histology of the joints. TILLMANNS. *Archiv f Mikroskop. Anat.*, x., 4, 1874.

Course of the fibres in the spinal cord. SCHIEFFERDECKER. *Ibid.*

Origin of the seminal corpuscles. LA VALETTE ST. GEORGE. *Ibid.*

The active changes of form in nuclei. BRANDT. *Ibid.*

The albuminates that occur in the urine, renal casts, and exudations of fibrin. SENATOR. *Virchow's Archiv*, lx., 3 and 4, 1874.

The circulation in the frog's lung. KUETTNER, *Ibid.* lxi., 1, 1874.

The normal and diseased growth of the tubular bones. WEGNER. *Ibid.*

The convoluted glands of man. HEYNOLD. *Ibid.*

Physiology of the menopause. COHNSTEIN. *Ibid.*

Physiology and pathology of the secretion and movements of the lymph. EMMINGHAUS. *Archiv d. Heilkde.*, 3 and 4, 1874.

The sources and significance of sulphurous acid in the urine. BETZ. *Memorabilien*, 2, 1874.

Alkaloids in the urine. KERSCH. *Memorabilien*, 3, 1874.

The act of vomiting. GREVE. *Berl. klin. Woch.*, 28, 29, 1874.

Expulsion of a diphtheritic tonsil. LETZERICH. *Ibid.*

The reaction of paralyzed muscles. HITZIG. *Ibid.*, 30, 1874.

Excitants of coughing. PANTHEL. *Allg. Med. Central Zeitg.*, 64, 1874.

Transfusion of water in the capillaries under blood pressure. KOERNER. *Allg. Wien. Med. Ztg.*, 28, 30, 31, 32, 1874.

Open communication between the cerebral ventricles and the subarachnoid spaces. AXEL KEY AND RETZIUS. *Nord. Med. Ark.*, vi., 1, 1874.

Normal anatomy of the prostate. IVERSEN. *Ibid.*

Construction of the dark or double-bordered nerve. fibre. SCHMIDT. *Month. Micros. Journ.*, May, 1874.

Formation and significance of animal fat. HAMMARSTEN. *Ugeskrift f. Laeg.*, 26, 27, 1874.

SURGERY.

On the mechanism of gunshot wounds. WAHL. *Archiv f. klin. Chir.*, xvi., 3, 1874.

Review of cases in the eye and surgical clinic of Dr. Kemperdick in Colmar (1872–3). *Ibid.*

Flexion of the extremities as a method of arresting hemorrhage. ADELMANN. *Ibid.*

Lipomatous degeneration of muscles and nerves, and its relation to the development of sarcoma. GUSSENBAUER. *Ibid.*

Traumatic luxations. BARTELS. *Ibid.*

Case of congenital macroglossus combined with hygroma cysticum colli congenitum. WINIWARTER. *Ibid.*

Spontaneous dactylolysis—a peculiar disease of the fingers. MENZEL. *Ibid.*

Case of congenital cleft of the face successfully treated by successive plastic operations. HASSELMAN. *Ibid.*

Phosphorus disease of the entire lower jaw—subperiosteal enucleation—cure. OBALINSKI. *Ibid.*

Cystic spermatocele. PEITAVY. *Ibid.*

Partial atrophy of the skeleton. MOSENGEIL. *Ibid.*

Galvanism to destroy a large carcinoma. MOSENGEIL. *Ibid.*

Report on experiments with missiles. (Continuation.) BUSCH. *Ibid.*, xvii., 2.

Contributions to experimental surgery. FILEHNE. *Ibid.*

Studies on the structure of bone, and its changes in health and disease. FEHR. *Ibid.*

Artificial anæmia. (Bloodless operations.) ESMARCH. *Ibid.*

Minute anatomical changes in transplantation of the skin. THIERSCH. *Ibid.*

Experiments on the mechanism of intestinal strangulation. LOSSEN. *Ibid.*

Report of the surgical divisions of the Jewish Hospital in Berlin for 1872. MEYER. *Ibid.*

The first case of extirpation of the larynx (Billroth's) and the application of an artificial larynx. GUSSENBAUER. *Ibid.*

A case of congenital bony anchylosis of the jaw. SOLGER. *Virchow's Archiv*, lx., 3 and 4, 1874.

Investigations on erysipelas. LUKOMSKY. *Ibid.*

Cases of tetanus—two cures and one death under opium and chloral treatment. HANSEN. *Dorpat Med. Zeitschr.*, 3, 1874.

Statistics of various luxations. TILLMANNS. *Archiv der Heilkde.*, 3 and 4, 1874.

Scoliosis—its pathology. TILLMANNS. *Ibid.*

Arthritis deformans following ununited transverse fracture of the olecranon. *Ibid. Ibid.*

Tetanus in a boy nine years old cured by calabar bean. JARISCH. *Jahrb. f. Kinderhlkde.*, vii., 4, 1874.

Excision of the knee-joint, with recovery. FETZER. *Med. Corr.-blatt*, 18, 1874.

Changes in lamb's blood in the human system. PONFICK. *Berl. klin. Woch.*, 28, 1874.

Extirpation of the left scapula for a sarcoma. SCHNEIDER. *Ibid.*, 31, 1874.

Statistics of transfusion of animal blood. HELLER. *Ibid.*, 33, 1874.

Direct transfusion of lamb's blood. THURN. *Ibid.*

Case of phthisis pulmonum, cured by inhalation and transfusion of lamb's blood. BRUEGELMANN. *Ibid.*

Direct transfusion of lamb's blood. FLEMMING. *Allg. Med. Central Ztg.*, 55, 1874.

Report on cases of lithotripsy in practice. IVÁNCHICH. *Allg. Wien. Med. Ztg.*, 29, 1874.

Caries of acetabulum. PETRÆUS. *Hospitals Tidende*, 14, 1874.

Amputation of the entire tongue by the galvanocautery. VALERANI. *Gazz. del Clin.*, May, 1874.

Radical cure of varices. PONOLI. *Gazz. Med. Ital. Prov. Ven.*, May, 1874.

Economy of blood in surgical operations. SILVESTRI. *Ibid.*

Correspondence.

NEW DISCOVERIES IN HYDROPHOBIA.

PINE RIDGE PAPERS.

III.

AT least I imagine I have made a discovery, and have, luckily for myself, distanced all my competitors in the human race for fame. But if a man finds that he has brains, it is incumbent upon him to show them to advantage. I must therefore be excused for being a little positive in some of the statements I have to make. When I first announced the intention to discover Kanine I was determined to find it, as I had a theory of hydrophobia which could not amount to anything unless the said discovery was made. A medical friend of mine, to whom I confided my designs, informed me that I was two hundred years behind the times, and that an instrument had been figured by Galen to facilitate inoculation with this very material, which had, by the way, a very similar name.

I confess this rather staggered my enthusiasm; but as I afterwards found that his assertions were based upon the hearing of several envious and unsuccessful specialists, I was encouraged. There is no question in my mind but that the active principle of the laryngeal mucus is this Kanine or extract of Bark; and also that hydrophobine, which I expected was a deposit peculiar to the nerve centres, is identical with it. It will not serve any useful purpose to tell how I obtained the extract. Suffice it to say, that it was by an entirely new process which I defy any one to imitate. The fact is, I have invented an apparatus especially for the purpose, a description of which I intend to make public any time the profession choose to doubt its wonderful manner of working. As no one can be prepared at present to appreciate its adaptation to the purpose, and no one but myself can make it work at all, I do not expect that any advantages will be taken of me in the shape of suggestions for improvement.

Kanine, by a little stretch of the imagination, may be said to be a myxomatous material, at least so far as the number and arrangement of its ingredients are concerned. Contrary to what I at first expected, it has a striking affinity for water, its union with the latter being marked by a sensible rise in the temperature, a bubbling sonorous sound, with the production of froth upon the surface in which are suspended oil globules and granules. These phenomena are sufficient to distinguish it from all known extracts.

As yet it is impossible to say what particular effect this substance may have when injected into the circulation of animals. With the assistance of an enterprising newspaper reporter, I have already surreptitiously introduced it into the circulation of several healthy dogs in my neighborhood; but knowing the prejudices of the community against such a course, the determination is to keep the matter quiet for the present, and study the results from a thoroughly independent standpoint. My design by such a course is to give such dogs as may become infected, a chance to go through the different stages of the disease in a perfectly natural way, without the element of imagination having anything to do with a diagnosis. The point to be established is this: in case any of the owners of these dogs are bitten I can prove that they (the dogs) really had hydrophobia, and that they were not simply angry at the time the bite was inflicted. This may appear to some to be a trivial matter, but I believe in establishing premises to any argument—in striking for truth at its very root. Principles, not men, is my scientific motto.

At first I had a great deal of difficulty in demonstrating some remarkable microscopical changes in the nerve tissue. If you do not prepare specimens in a particular way, nothing is to be seen. The element of time is a most important one. With a pardonable but impatient anxiety to see what was to be seen, I yielded on two occasions to the importunities of my friend the reporter, to place slices under the microscope before the time was up. My experience teaches me that nothing less than three hours will do, no matter what process you may employ. My plan is peculiar and original, and here I am again reluctantly compelled to refer, in passing, to my new analysing apparatus. To this I have an attachment, an electric battery and freezer, so arranged that currents from both can be sent through the specimen alternately, thus greatly expediting the result. A gentleman much given to electricity, who happened upon me unawares, and while the apparatus was working, informed me that my arrangement was an infringement upon one of the patents on electrical machines. If this be so, I am very willing to fight it out so long as any medical journal will give me the space to do it. And this, by the way, can give me no mean advantage in the way of an advertisement of my particular specialty. But this will be, of course, secondary to the principle involved of proving to the world that I am capable of making useful discoveries and sticking to my text at all hazards. Until disputed, I claim my plan to be original and in advance of the age.

As no time is to be lost when once the specimen is ready for the microscope, many inexperienced persons are apt to be disappointed in what they may wish to see. To prevent this, I have caused to be constructed an attachment to my apparatus, in the shape of a double-back-action concentric, parallel-tunnelled slicer, worked by a lever, and this lever connected with the negative pole of the battery. This knife operates directly upon the specimen while in the preparatory mixture, and transfers it rapidly to a slide before the granules have a chance to change their positions. Electricity is the motive power in this case. The arrangement of its blades is such that every section is cut so as to show a gradual and varying thickness from the $\frac{1}{10}$ to the quarter of an inch. The obvious advantage of this is, if you fail to see anything in the thin section, you are sure to find it in the thicker portion, of course taking into account the ordinary difficulties of transmitting light through the larger end.

If all these conditions are fulfilled, any experienced microscopist can find what he desires to see.

Now as to microscopic appearances in this disease, they are sufficiently numerous and important to warrant a reference. For myself I prefer the thicker por-

tions of the specimens for examination under the microscope, because any good results which may be obtained are wholly due to skill in the use of the instrument. If any one aims at high art in microscopy, the more difficulties there are to encounter the better able is he to maintain a superiority—and this is, after all, what we are all modestly striving for.

Of course all the elements of nerve tissue are present if the specimen is duly placed upon the slide and the cover in position. After this, the most important matters to be alluded to are focussing and light. The nerve cells are best brought out by pressure of the object glass upon the cover. You are sure of a short focus by this plan (and I believe in a short focus), at the same time the cells themselves are seen to be much enlarged. My assistant has offered what he believed to be an original suggestion, that this enlargement was due directly to pressure. I, however, had the same idea long ago until I proved myself mistaken by noticing that the cells still remained the same size after the pressure was removed. I have also noticed that the oil globules and granules which are so abundant can be made to change their relative positions by a delicate and judicious regulation of this pressure. This fact has a very important bearing in the estimation of the relation of the elements of any tissue to each other.

Now as to treatment. This is really a very important point in any disease. It is unnecessary for me to say that my experience has been very large, and that what I am about to recommend is of particular value. Permit me to state that I have tried everything in the shape of medicine that has ever been tried before, but I found myself utterly at sea until I struck on a plan of my own.

When speaking of the discovery of Kanine I remarked that I had a theory as to the nature of hydrophobia, and my treatment is necessarily founded upon it. In the first place, Kanine is the active principle of the disease. When an animal is bitten, the granules which make up the bulk of this new substance find their way through the nearest nerve into the nervous circulation. They lie dormant for a while, like the syphilitic corpuscle, then, after they have become powerful and multiplied, everything is ready for the explosion. By a sort of reflex influence they are transferred to the medulla, where they show a peculiar affinity for the roots of the nerves which originate in that quarter. As a result of their presence the new cells are much irritated, enlarge, and finally become the victims of a chronic fatness better seen under the microscope than described. Then the irritation, in accordance with well-known neurostatic laws, is transferred to the ends of these nerves, and the larynx secretes the thick mucus which forms the grand receptacle for the Kanine. This animal bites another, and so the chain of circumstances is kept up.

There are two things to take into account in the treatment. The first to prevent the nervous centre from becoming irritated, and the second to prevent the accumulation of the mucus. Of course the best plan is not to be bitten at all, but once bitten the granules are sure to get the start of even the first physician who arrives on the scene. The next best thing is to neutralize their effects—and my method of applying galvanism is the thing. I have devised an electro-galvanic muzzle which not only keeps up a constant supply of static electricity to the medulla, but by means of its connection with a negative pole in the anus keeps the whole spinal column in a state of lively interchange of molecular elements. It is this very action which destroys the Kanine granule, and which, at the same time, quiets the irritation of the whole cerebro-spinal system. This method is an improvement upon the one lately advocated in the treatment of tumors, and known as "working up the base."

In applying the muzzle I have a word of caution to offer. I need not say it is a very ticklish little operation, and is not likely to be well received by the patient. I have been in the habit of entrusting the application to my assistant, and have never had cause to regret it. In fact, I think in all the operations around hydrophobic dogs, it is always prudent to leave them to a trusty student. As proof of this I may state, in passing, that I have just attended the funeral of the attendant who was bitten in the buttocks, and whose case I referred to in my previous paper.

As for the mucus in the larynx, that is removed by an aspirator, which I have modified for the purpose. The instrument is attached to a collar, is worked by means of a concentric screw, and only while the animal is making convulsive efforts to swallow. The end of the screw impinges against the under jaw, and any movement of the latter sets the former in motion. It is needless to say that the animal is invariably relieved. One of my assistants who was bitten by rolling backwards over a barrel upon a hydrophobic dog, and who is troubled with this Kanine mucus, wears an aspirator in his shirt collar. He has written me a strong certificate, which he is quite willing, on his own account, to have freely advertised.

Just as soon as the mucus accumulates in any undue quantity the convulsive efforts to swallow commence, and then the beauties of my instrument come in, relieving the patient just in the nick of time. I have been informed that it has evacuated from one dog-patient three quarts of mucus in twenty-four hours. What could a poor dog do with that quantity of secretion in his larynx? The answer is obvious even to a first-course medical student. My mucoid assistant says he would not be without it. He thus eloquently refers to its utility in his certificate: "I have used the Pine Ridge Aspirator for a long time. My very life hangs upon its working. Existence would be impossible without it. It is a boon to the race. I cordially recommend it to everybody who has been bitten by a mad dog, or who is likely to be bitten. I find it best to have it always on hand." etc. The last two sentences are particularly strong, and were inserted by myself over his signature, to make the apparatus sell.

In these papers I have tried to go over, in a cursory manner, the whole history of hydrophobia, and have taken particular pains to point out the properties of the active principle of this disease—Kanine. If I have succeeded in directing the attention of the profession to this subject, and proving that no one but myself knows anything about it, I shall be amply repaid for the trouble I have taken. To such as have a more than ordinary interest in the further study of this disease, I would refer them to my forthcoming work upon the subject. Price, $5.00. * * *

PINE RIDGE, ON THE HUDSON.

SOLUTION OF QUININE FOR HYPODERMIC USE.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR:—I notice, in a recent number of the MEDICAL RECORD, among the "Notes of Practice" from Bellevue Hospital, the formula for the solution of quinine, which I have been in the habit of using for hypodermic injection. The reporter speaks of thirty

minims as containing between two and three grs. of quinine. It would be more correct to say three and four grs., as there are fifty grs. in each fluid ounce. He also speaks of using alcohol. This complicates the solution and had better be left out. I used it only because, for convenience, and to be sure of retaining the carbolic acid in a liquid form. I use, for all purposes, a mixture containing equal parts of the two. My assistant, Dr. G. W. Murdock, in preparing this formula frequently, has lately improved upon it, inasmuch as the solution now contains only about five minims of strong sulphuric acid instead of eight. It is a serious error to state, as in the article referred to, that the acid (sulphuric) is "to be added drop by drop until the solution clears up," as in that case, one compounder might have five minims, and another ten or fifteen, according to his care and skill in manipulating. Even careful apothecaries, with my written directions before them, have failed in making a clear solution with the proper quantity of the acid. Finding that the *carbolic acid* rather interferes with the solubility of the quinine, I now direct only two minims to the ounce. So that the formula reads:

℞. Quinia disulphatis ..... gr. l.
Acidi sulphurici ..... ♏ v.
Acidi carbolici ..... ♏ ij.
Aquæ destillat ..... ℥ i.
M.

And it had better be manipulated as follows: Place the quinine—say 400 grs.—in a mortar, rub up thoroughly, distribute the strong sulphc. acid (♏ xl.) over it; rub it in until well mixed; add cold water (℥ viij.); place in porcelain dish over a lamp, and let it come to the boiling point, stirring with a wooden spatula. When cold, add the carbolic acid (♏ xvi.) and shake well in a bottle. It should then be perfectly clear, though it should be filtered to separate the small foreign particles which are usually floating in it.

COLD SPRING, N. Y. F. D. LENTE, M.D.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from September 5th to September 18th, 1874.

ABADIE, E. H., Surgeon.—Relieved from duty in Mil. Div. of the Atlantic, to proceed to St. Louis, Mo., and await orders. S. O. 200, A. G. O., Sept. 11, 1874.

SUMMERS, JNO. E., Surgeon.—To report to the Comd'g Gen'l Dept. of the Platte for duty as Medical Director of that Department. S. O. 200, c. s., A. G. O.

SMITH, J. R., Surgeon.—Assigned to duty as Post-Surgeon at Fort Monroe, Va. S. O. 200, c. s., A. G. O.

WRIGHT, J. P., Surgeon.—Assigned to duty as Chief Medical Officer, District of New Mexico. S. O. 96, District of New Mexico, Sept. 7, 1874.

STORROW, S. A., Asst. Surgeon.—To report in person to the Commd'g General Dept. of California for assignment to duty. S. O. 200, c. s., A. G. O.

HARTSUFF, A., Asst. Surgeon.—Assigned to duty as Post Surgeon at Fort Laramie, Wy. Ty. S. O. 126, Dept. of the Platte, Aug. 29, 1874.

NOTSON, WM. H., Asst. Surgeon.—Ordered to New York City for examination for promotion before the Army Medical Board, and at its conclusion to report to the Commd'g General Dept. of the Platte for assignment. S. O. 200, c. s., A. G. O.

HUNTINGTON, D. L., Asst. Surgeon.—Relieved from duty in Dept. of the Columbia, and will report in person to the Commanding General Dept. of California for assignment to duty, in addition to his duty as a member of the Medical Examining Board, now in session at San Francisco, Cal. S. O. 203, c. s., A. G. O., Sept. 16, 1874.

WILLIAMS, J. W., Asst. Surgeon.—Assigned to duty as Post Surgeon at Fort Rice, D. T. S. O. 193, Dept. of Dakota, Sept. 5, 1874.

BROOKE, JOHN, Asst. Surgeon.—Assigned to duty at Fort Cape Disappointment, W. T. S. O. 124, Dept. of the Columbia, Sept. 4, 1874.

KINSMAN, J. H., Asst. Surgeon.—Granted leave of absence for one month, with permission to apply for an extension of five months. S. O. 189, Dept. of Dakota, Aug. 31, 1874.

BARTHOLF, JNO. H., Asst. Surgeon.—Ordered to New York City for examination for promotion before Army Medical Board, and at its conclusion to report to the Commd'g Gen'l Dept. of the Columbia for assignment. S. O. 200, c. s., A. G. O.

CARVALLO, C., Asst. Surgeon.—Ordered to New York City for examination for promotion before Army Medical Board, and at its conclusion to report to the Commd'g General Dept. of the Missouri for assignment. S. O. 200, c. s., A. G. O.

LAUDERDALE, J. P., Asst. Surgeon.—Assigned to duty at Fort Wingate, N. M. S. O. 143, Dept. of the Missouri, Sept. 10, 1874.

ELBREG, F. W., Asst. Surgeon.—Ordered to New York City for examination for promotion before the Army Medical Board, and on its conclusion to report by letter to the Surgeon General. S. O. 200, c. s., A. G. O.

HALL, J. D., Asst. Surgeon.—Assigned to duty as Post Surgeon at Fort Benton, M. T. S. O. 193, c. s., Dept. of Dakota.

EWEN, CLARENCE, Asst. Surgeon.—Granted leave of absence for twenty days from October 1, 1874, on condition that he furnishes, at his own expense, a substitute during his absence. S. O. 135, Dept. of the Gulf, Sept. 9, 1874.

Medical Items and News.

MEDICAL BOARD OF BELLEVUE HOSPITAL.—The following is the Medical Board of Bellevue Hospital as constituted by recent resolutions of the Commissioners of Public Charities and Correction.

Consulting Physicians and Surgeons.—John T. Metcalfe, B. W. McCready, William H. Van Buren, Isaac E. Taylor, Fordyce Barker, Lewis A. Sayre, Alexander B. Mott, and John J. Crane.

Visiting Physicians and Surgeons.—Austin Flint, Sr., James R. Wood, Alonzo Clark, Henry B. Sands, Alfred L. Loomis, Stephen Smith, Wm. B. Eager, Ernst Krackowizer, Edward G. Janeway, Frank H. Hamilton, Francis Delafield, Thomas M. Markoe, William H. Thomson, Erskine Mason, Gouverneur M. Smith, and John W. S. Gouley.

VELPEAU.—An anecdote is told of Velpeau, the eminent French surgeon. He had successfully performed,

on a little child five years old, a most perilous operation. The mother came to him and said:

"Monsieur, my son is saved, and I really know not how to express my gratitude. Allow me, however, to present you with this pocket-book, embroidered by my own hands."

"Oh, madame," replied Velpeau, sharply, "my art is not merely a question of feeling. My life has its requirements like yours. Dress, even, which is a luxury to you, is necessary for me. Allow me, therefore, to refuse your charming little present in exchange for a more substantial remuneration."

"But monsieur, what remuneration do you desire? Fix the fee yourself."

"Five thousand francs, madame."

The lady very quietly opened the pocket-book, which contained ten thousand francs in notes, counted out five, and after politely handing them over to Velpeau, retired. Imagine his feelings!

MALPRACTICE—PROPOSED LAW.—The Northeastern Ohio Medical Association has proposed to the Legislature a law with the following requirements: 1st. That in every case of malpractice the question shall be referred to a board of three medical men; one to be chosen by the patient or his or her next friend, one by the surgeon charged with malpractice, and these two shall make choice of an umpire. 2d. That it shall be the duty of these arbitrators, after hearing the testimony on both sides, to give the written opinion of the majority to the contestants in the case. If this opinion be adverse to the charge of malpractice, and the plaintiff shall still proceed to action at law, that then he be required to give bail for the costs, and in the event of a failure to establish his case, he may be made to answer in damages to the defendant for his loss of time and expense incurred in the defence.—*Philadelphia Medical Reporter.*

THE GRAPE CURE.—The headquarters of this remedy are at Merau, in the Tyrol, of which province it was some time the capital. Apart from the specific benefits of the "cure," Merau has much to recommend it in the way of climate, to which, we suspect, the grape treatment owes not a little of its efficacy. In August, September, and October, its population, 4,500, is considerably reinforced by German, Russian, and Italian visitors, who, with a sprinkling of English and Americans, have come for the "cure." Accommodation is comfortable and cheap—cheaper, while not less comfortable, than in most of the Italian and French places of resort. Invalids suffering from chest affections—bronchitis or consumption in its pre-tubercular stage—are the chief subjects of the grape treatment. Less than three pounds of grapes a day is not enough for efficacy. The patient begins with one or two pounds per diem, dividing the quantity into three portions—one taken an hour before breakfast; the next before dinner, which comes off at 12.30 or 1 P.M.; and the last in the afternoon or evening. The grapes are eaten *sub Jove frigido*, and after two or three days the quantity is increased by half a pound until it reaches three or four pounds. This amount often suffices the patient, who finds, as a rule, that he gains in weight and in strength also. Chronic liver complaints, especially when due to excess in wine-drinking, are, it is said, remarkably relieved by the "grape cure," the potash salts in the fruit supplying the element which the wine, in the process of manufacture, has lost. Hepatic dropsy has been known to be mitigated in this way. Patients should not be discouraged if, after the first day or two, they feel not so well as they were before; while one signal point in favor of the cure is this: that no special diet is enforced. Indeed, the grapes themselves become so satisfying that indulgence in other food is hardly necessary. Before trying the "cure," however, the patient should have his case thoroughly examined by his physician, who will tell him how and to what extent he may avail himself of the "Natur-therapie of Merau."—*The Lancet.*

HAY-FEVER.—Dr. Geo. M. Beard, of this city, is engaged in the study of the so-called hay-fever with a view of proving it to be of nervous origin. For this purpose he has issued blank circulars to such as may be interested in aiding him in making out statistics.

PHTHISIS.—To stop the ravages of consumption in a family that had lost several of its members by the disease in Lewiston, Me., the body of the last one who died was disinterred and reburied with the face downward.

INHERITANCE OF DEFORMITIES.—The heredity of anomalies of organization has been demonstrated in several instances. One of the most singular of these is the case of Edward Lambert, whose whole body, except the face, the palms of the hands, and the soles of the feet, was covered with a sort of shell, consisting of horny excrescences. He was the father of six children, all of whom presented the same anomaly at the age of six weeks. The only one of them who lived, transmitted the peculiarity to all his sons, and this transmission, passing from male to male, persisted through five generations. Mention is also made of the Colburn family, where the parents for four generations transmitted to the children what is called sexdigitism, *i.e.*, hands and feet with six digits each. Albinism, halting, hare-lip, and other anomalies, are in like manner reproduced in the progeny.—"*Heredity*," in *Popular Science Monthly.*

HÆMATOMETRA IN A CASE OF UTERUS, FROM NON-COMMUNICATION OF ONE OF THE CAVITIES WITH THE VAGINA.—The patient was 21 years of age, and entered the Christiania Hospital March 19th, 1873. She had suffered for three years from pains in the right iliac region; these pains increased during the menstrual flow, which was regular but scanty. On examination there was found in the right iliac region a mobile, elastic tumor, three or four inches long and one broad; just below this, and somewhat nearer the median line, there was another tumor, filling the pelvic fossa, and extending half an inch above the symphysis. On examination, no trace of the vaginal portion of the uterus was found. In making a diagnosis, retro-uterine hæmatocele, uterine fibroid, and pelvic cellulitis were excluded, and it was believed to be a case of ovarian tumor displacing the uterus. A puncture was made through the vagina into the most prominent portion of the tumor, and a small quantity of a thick, brownish fluid removed by aspiration. Symptoms of peritonitis occurred on the fourth day, and the patient died on the ninth day after the operation. At the autopsy it was found that the uterus was divided into two portions, that each of the halves was regularly furnished with Fallopian tubes and ovaries, but that the right cavity had no communication with the vagina. Hence it became gradually filled and distended by the retention of the menstrual blood. There were also found signs of old and recent peritonitis and commencing abscesses in the left kidney, which was larger than usual. The right kidney was wanting, but the suprarenal capsules were present on both sides.—*Nord. Med. Ark.*, vi., 1. 1874.

Analysis of the Air in Rooms where the Paper Hangings Contained Arsenical Colors.—Hamberg alludes to the well-known fact that observations have already shown the danger of breathing the air of rooms where arsenical papers are used. The way in which such poison operates has been variously explained by different observers. Some have supposed that the fine particles of coloring matter became separated from the paper, and, floating in the air, are inhaled with the breath. Chemists have been at variance, some finding arsenical gases in the air of such rooms, and others arriving at negative results. Hamberg's xperiments were made in a room where the color employed was Schweinfurt green.

His apparatus was as follows:

a. A U-shaped tube for the reception of the dust. *b.* Three U-shaped tubes, filled with cotton, to completely separate the solid particles of arsenic from the air. *c.* Two bulb apparatuses, containing a solution of nitrate of silver, to collect any arsenic which might be dissolved in the air. *d.* Two gasometers of fourteen litres' capacity, alternately filled with water, to establish an aerial current.

The air was conducted through this system of tubes from the 16th July to the 16th Aug. of 1873. The quantity of air thus examined amounted to 2,160 litres. In the course of the experiment the solution of nitrate of silver gradually deposited a black precipitate, resembling the arsenite of silver, and after the removal of the silver by nitric acid, the characteristic arsenical ring was obtained by the Berzelius-Marsh apparatus.

The author concluded from these experiments that arsenic was present in the air, and probably under the form of arseniuretted hydrogen.—*Nord. Med. Ark.*, vi., 1. 1874.

A Model Advertisement.—A recent Journal—*not* of the regular school—contains a long advertisement of a celebrated practitioner, from which the following extract is taken:—

Have yeez pains in yer bones, or a botherin' ache
In yer jints afther dancin' a jig at a wake?
Have yees caught a black eye from some lounderin' whack?
Have yeez vertrebral twists in the sphine av yer back?
Whin yer walkin' the strates are yeez likely to fall?
Don't whisky sit well on yer shtomach at all?
Sure its botherin nonsense to sit down and wape,
When a bit av powdher 'ill put yeez to slape;
Shtate yer symptoms, me darlins, and niver yeez doubt,
But as sure as a gun I can shtraiten yeez out.
Come thin ye poor craythurs, and don't yees be scairt!
Have yeez batin' and lumberin' thumps at the hairt?
Wid ossification and acceleration,
Wid attenuation and ragurgitation,
Wid amaciation and axascerbation,
Wid pracipitation and hapitization,
Wid praoccupation and avaporation,
Wid hallycination and acrid sacration,
Wid black arruption and purtification,
Wid great jactitation and conagulation,
Wid square titilation and cowld perspiration?
Be me sowl! But I'll bring all yer woes to complation;
Onless yer in love—*thin* ye're past all salvation.

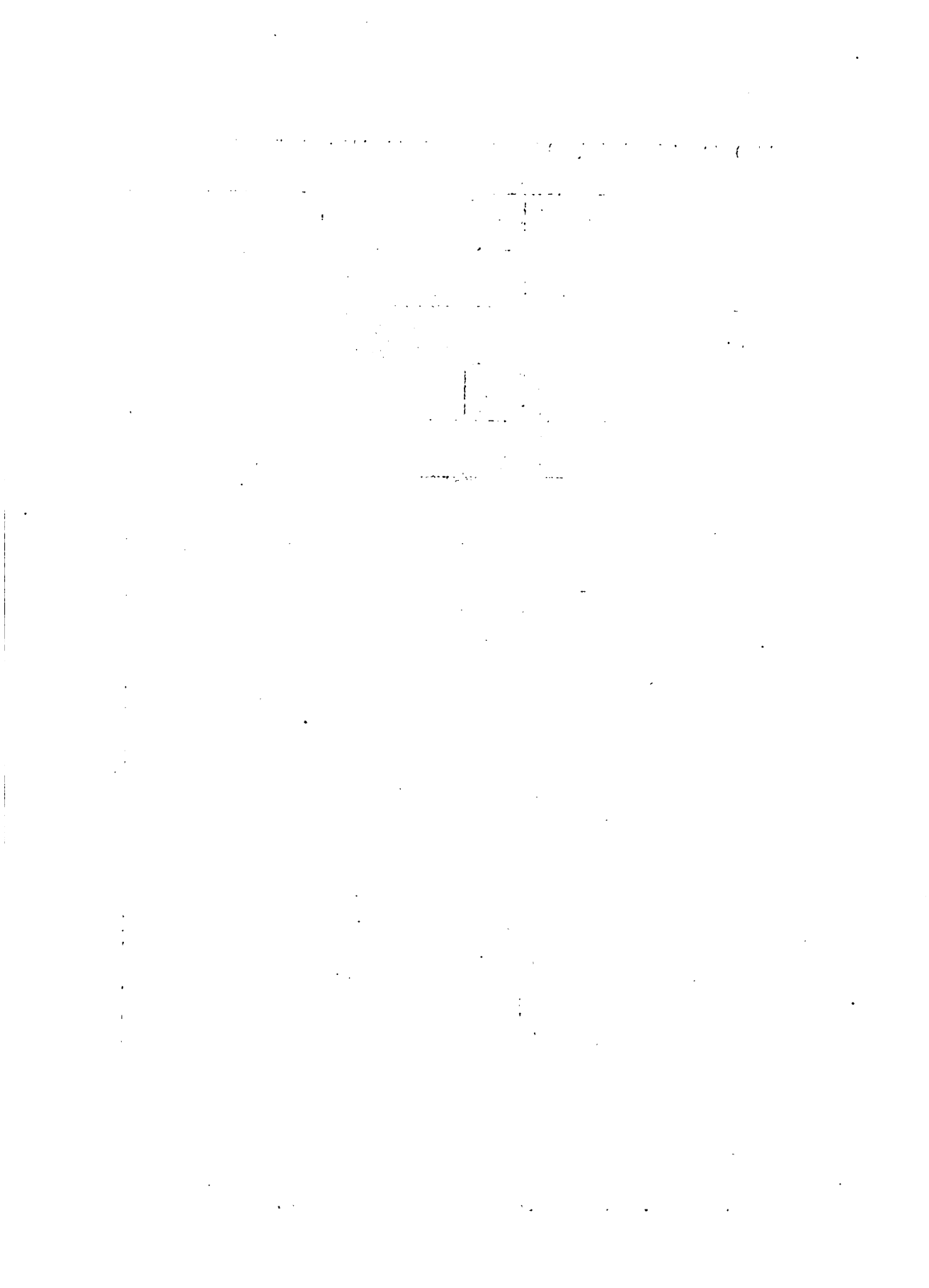
Slow Progress of Homœopathy in Great Britain.—The *Medical Press and Circular* notices a leading article in the *Homœopathic Review*, in which the latter laments over the unattractiveness of the homœopathic practice, and makes an appeal to its readers to unite in seducing, if possible, the rising generation of the medical profession. The *Review* makes the statement that "of the towns in England above 10,000 and below 20,000 population at the last census, 45 possessed no qualified representation of homœopathy at all, and twelve other towns had only one each; of the towns between 20,000 and 50,000 population, no less than 38 had no resident homœopathist—14 of them had only one each, and 5 other only two each; of the towns between 50,000 and 100,000, 9 had no homœopathic physician, 7 had only one each, and 6 others had only two each; while there were, and are actually, 4 towns above the 100,000 limit in which no homœopathist has settled."

The *Review* further says—. . . . "Neither can we feel satisfied that our hospitals and dispensaries do at all what they might do in the way of influencing third and fourth years' students. What has London done in this matter with its hospital of sixty beds? What has Birmingham with its well-tried staff and influential committee? What have the Liverpool dispensaries, which admit their 10,000 or 12,000 cases a year? It is not from these places that our recruits have come or are coming. . . . The local influence of these institutions on the members of the profession, and on the students in our metropolitan and provincial schools, is practically *nil*."

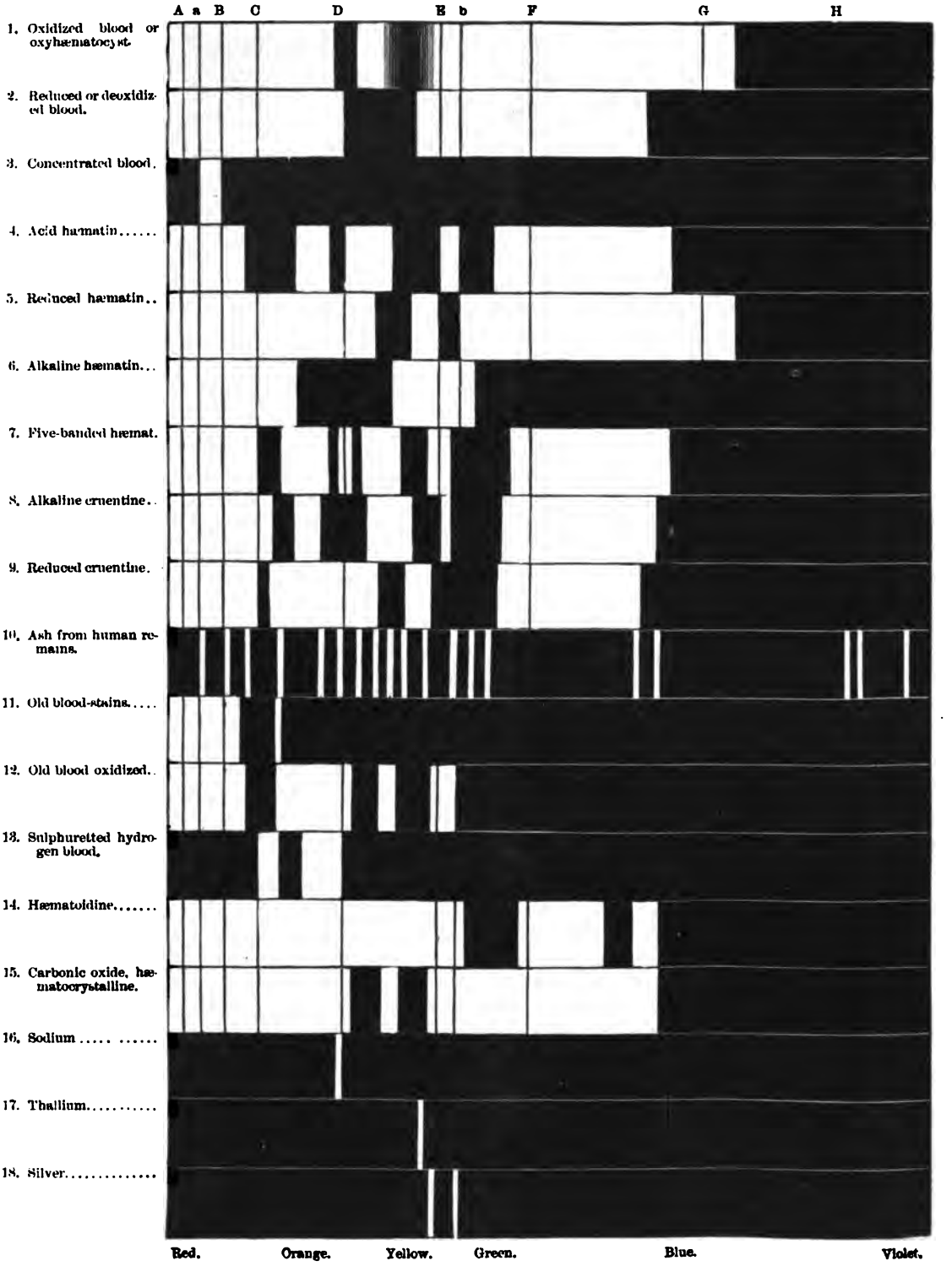
Action of Iodide of Potassium upon the Blood.—The reactions of the iodide of potassium, when administered medicinally, are thus described: In the stomach the iodide either undergoes no change, the elements of ordinary articles of food being incapable of decomposing it, or else by means of the chlorine hydriodic acid is formed, by which the ultimate reactions are not modified. Entering the circulation in an exceedingly dilute state, the iodide of potassium is at once decomposed by the superabundant carbonic acid into free iodine and carbonate of potassa. Now the iodine will have the greatest affinity for those substances in the blood with which it makes the most complex combinations, this affinity being most intense at the moment of the iodine becoming free. Therefore, of these substances in the blood those first acted upon would be the "miasmatic matters and ferments," next to these the fibrinous and then the albuminous substances, and last of all, the fats. The iodine acts upon these substances by virtue of its disposition to take the place of their component hydrogen. It, however, does not form permanent compounds with them, but, having broken up their chemical union, facilitates their oxidation in the oxygen of the blood. The free hydrogen combines with an equivalent of iodine, forming hydriodic acid, which is in turn attacked by the oxygen, iodine is again eliminated, and so the process is continued.

On the other hand, the other component of the iodide of potassium undergoes changes which supplement the action of the iodine. As the compound is decomposed the potash is changed into the hyperoxide of potassium, the only oxygen compound upon which the iodine does not act. Here we have, besides the iodine, a powerful decomposing agent, which, by its strong oxidizing effect upon organic substances, assists the consumption of the blood elements. The hyperoxide is reduced to potassium, which again combines with carbonic acid, and carbonate of potassa is produced as at first.

Hence the action of the iodide of potassium depends upon the decomposing effect of free iodine upon the substances contained in the blood, and their oxidation and consumption by the hyperoxide of potassium—"a result," the writer observes, "which is confirmed by clinical experience."—*Prof. Kammerer, Virchow's Archiv*, 1874, and *Memorabilien*, xix., 4.



SPECTROSCOPIC ILLUSTRATION FOR DR. WATERMAN'S ARTICLE.



Original Communications.

THE IMPORTANCE OF THE SPECTROSCOPE IN FORENSIC CASES.

A PAPER READ BEFORE THE MEDICO-LEGAL SOCIETY OF NEW YORK, APRIL, 1874.

By S. WATERMAN, M.D.,

NEW YORK.

MR. PRESIDENT AND GENTLEMEN:—No sooner were the brilliant discoveries, by the aid of the spectroscope, in chemistry and astronomy made known, than the attention of scientific and professional men was directed to the inquiry, Whether the marvellous analytical powers of this instrument could not also be employed in the service of medicine? This inquiry, upon whose solution some of the best minds of the continent were employed, has given a highly satisfactory and affirmative answer, and its adaptation to physiological research will furnish us the material for this evening's consideration.

By means of spectrum analysis we have become acquainted with the laws governing vital processes. By it we have been enabled to lift the curtain, beyond which, since eternity began, those mysterious processes were carried on, which man sought continually to understand, upon which the most strange and conflicting theories prevailed, and which he erroneously thought could never be unravelled. Spectrum analysis has carried us far beyond our former conceptions of the laws of life, health, and death, and forensic medicine comes in for a fair share of the information and benefits thus accumulated from the advance of this science. A few years ago it would have been possible to tell you all that the spectroscope could do in forensic medicine, in the space of half an hour; at this present day, the material that has been accumulated could not be exhaustively laid before you in a dozen lectures. Spectral analysis applicable to forensic medicine has become a science by itself, compact, reliable, well-founded, and far-reaching, capable of solving most important legal questions; its application is simple, and it responds to the minutest amount of material. Indeed, it is the extraordinary delicacy and sensitiveness of the spectral test which gives to its application so great a value, and so extensive a scope. It responds distinctly and immediately where the highest magnifying powers of the best microscopes can no longer give us any information; it gives us a valuable reaction for every alteration which blood undergoes when acted upon by physical or chemical agencies; it analyzes the flames of gases, and those of mineral and metal poisons, and unravels the secrets of crime with wonderful alacrity and unimpeachable certainty.

By spectral analysis we understand a scientific process in which light, solar or artificial, is made use of to analyze and to demonstrate substances both organic and inorganic. The instrument employed consists of a system of prisms and lenses, by means of which rays of light are broken up into a series of colored tints, called a spectrum, and which offers to the eye all the colors of the rainbow with great beauty and brilliancy. The instrument thus employed is called a spectroscope, or if connected to a microscope, a micro-spectroscope. It is well known what a prism is, and the changes which white light undergoes when passing through it. In the first place the rays, as they pass through a prism, are bent out of their course; they spread fanlike to the right and to the left, they disperse, and this we call the refraction of rays. But we witness another and more interesting phenomenon. The white rays in passing through the prism are decomposed, broken up in a number of beautiful tints, arranged in never-changing order, presenting red, orange, yellow, green, blue, and violet. This prismatic band we call a spectrum. We distinguish between an interrupted and a continued spectrum. When artificial light is passed through a prism, the colored band is not traversed by any lines, and the spectrum is therefore a continued one. When, however, sun, moon, or star light is used, the spectrum is found to be traversed by many lines, and this is therefore called an interrupted spectrum.

In order to see these lines well, we admit the rays through a narrow slit in a shutter leading to a darkened room. In the spectroscope such a slit is attached to one of the tubes.

Newton, although he examined this subject in all its bearings, never saw the sun lines, because he obtained his spectrum by a round hole in the shutter, and the rays that entered overlapped each other and gave him a diffused spectrum. Wollaston described these lines in 1802, but did not understand their importance. Frauenhofer, a learned optician at Munich, used them first for purposes of measurement in 1814. He designated the most prominent of these lines by the letters of the alphabet, from A to H, and they have since been known as the Frauenhofer lines. Kirchhof left us a map of these lines, a masterpiece of correctness and skill, containing many hundreds of sun lines, and our distinguished Rutherford has photographed them right from the sun himself. The exactness of these two mappings is truly wonderful. Angstroem has given us a map containing many thousands of these lines. The orbs receiving their light from the sun have all these lines in the exact position of the spectrum. Fixed stars, like the resplendent Sirius and others, give quite different arrangement of sun lines, and some of the comets give only one or two bright lines, and no black lines at all. Professor Draper, of this city, whose merits in this direction are gratefully acknowledged, has given us a map containing a great number of sun lines, invisible under ordinary circumstances, but which can be made visible under certain favorable conditions; these additional lines are made evident at both the red and violet part of the spectrum, making it of course longer than usual. The human retina is not sensitive to the light waves beyond the red and the violet part of the spectrum. As to the prevalent theory of light, the entire universe is filled with an ethereal substance too subtle to be weighed or measured, in which the "celestial hosts" move without resistance. This ether penetrates all matter, and permeates the innermost atoms. It is in a condition of ceaseless motion; its waves travel with inconceivable velocity, but differ among themselves in degree of velocity and length of each wave. The vibrations least in velocity produce sound, those coming next produce heat, and those having the highest degree of velocity produce light.

The following eloquent description of the oscillations is given by Dove:

"Let us suppose in the midst of a dark room a slender iron bar is suspended and in motion, and there is also an apparatus present by means of which the swinging motions are continually increased. We enter the room at the moment the bar makes four oscillatory movements per second. Neither ear nor eye gives us any intimation of the presence of the swinging bar. But the movements increase, they reach thirty-two per second. Hark! a deep base sound reaches our ears

it rises in pitch with the still increasing oscillations, it passes through all middle stages up to the highest, shrillest note. We are yet full of wonderment, when all sound dies away, and the silence of the grave again surrounds us. But from the region where the sound proceeded we are made sensible of an agreeable warmth: the oscillations still increasing we feel the warmth radiating in all directions, in the manner a chimney fire radiates. All is yet dark. The oscillations are now counted by the millions in a second. Behold yonder dawning light; it grows more brilliant, the bar begins to glow, first in red color, then in orange, yellow, green, blue, and violet, until all again sinks back in night and darkness." At this stage you have to count the oscillations by the billions per second. Four hundred and fifty billions are requisite to produce upon the retina the sensation of red light; 500 billions to impress it with orange; 550 billions of oscillations per second will make us sensible to yellow; and 800 billions will impress the retina with violet light. Beyond this our eye is incapacitated to appreciate any increase of oscillations, although, as we have already adverted to, these oscillations exist, and can be made manifest by artificial means.

Thus Nature speaks to us in soft and musical notes when near; but when she communicates with us from regions that can be measured only by sun distances, she sends her greetings upon the swift pinions of light. Science has interpreted her cosmic voice, and upon this frail wave the human mind soars upward to the verge of creation.

The Frauenhofer lines are of the greatest importance in spectral analysis. Through them we can register any changes we observe in the spectrum, and measure the breadth and the distance of absorption bands from each other. We know now that these lines are produced by various metals in an incandescent condition in the sun, and they can be produced artificially by burning these metals and minerals and comparing the spectra of these vapors. Thus iron, which has a very great number of lines in the sun spectrum, has its most prominent line at E. C, F, and G are peculiar to burning hydrogen. Magnesium yields the C line, and the H lines, according to Angstroem, are peculiar to calcium. The D line has a historical significance. Burning sodium yields this line. All the progress in spectroscopy is connected with this line. It is the source from which all the wonderful discoveries in solar and terrestrial chemistry had their origin. This line D, called also the sodium line, can be resolved into two or even more lines by the aid of strong light and the combination of several good prisms. The nickel line lies right between them. The coincidence of the D line with that of burning sodium attracted the attention of Professor Kirchhof, of Heidelberg. There was one thing in this coincidence that he could not at first explain. The sun line, as you see here, is a black line; the line of burning sodium is a bright yellow line, as you see here; yet both occupy precisely the same position in the spectrum. One day, whilst examining a flame of burning sodium, he caused the sun rays to pass through the sodium vapor, and lo! he obtained a black line instead of the bright yellow one. He had found the solution of his query. He at once reasoned that there must be burning sodium in the sun, and that there must be a vaporous envelope which absorbed the yellow line and converted it into a black line. Thus, by a most logical and ingenious mode of reasoning, and by a lucky accident, he demonstrated that these lines had a common origin, and that therefore any sun or stars that gave this D line had sodium in an incandescent condition as one of their constituents. Since then all other black sun lines have been reversed by various scientists. Thus was the foundation laid for the greatest discoveries of the age, and a new and almost infinite vista was opened into the nature and composition of worlds, of which, a quarter of a century ago, we had not the least presentiment.

Leaving the historical part necessary to our subject, let me say a few words as to the manner of making examinations by the spectroscope.

The solids must be brought to a state of incandescence by heat. We employ for this purpose, where no very great temperature is necessary, a Bunsen burner; where greater heat is necessary we resort to the electric arc, which is capable of fusing every metal known.

When metals are thus heated up to an incandescent state, they emit rays of all degrees of refrangibility. If we examine then the evaporating substance spectroscopically, we find peculiarities in the spectrum enabling us to diagnosticate its nature. Fluids are placed before the slit of the spectroscope in suitable glass vessels with plano-parallel walls, or we may use suitable glass tubes. When a ray of light is made to pass through these fluids, ere it impinges upon the prism, we observe an absorption of light in various parts of the spectrum, varying, of course, with the fluid employed; they are called absorption bands. Some colored fluids have one or more bands, changing in position, depth of shading, distinctness of outline, breadth and manner of appearance, furnishing landmarks so distinct and permanent that a recognition of a particular spectrum is made easy, even to the man who is not accustomed to use the spectroscope. As sources of light to examine fluids, we use petroleum or oil flames, and where a maximum light is necessary we may employ the oxygen lime-light, the oxygen spirit-light, and at times, with great advantage, the magnesium light. Gases are examined by means of electric induction sparks. Usually the gases resist the passage of these sparks in their natural state of density. We therefore exhaust a part of the gas with the air-pump. We use thin-bored thermometer tubes, with a bulb on each extremity, into which electrodes of platinum or aluminum are fixed. All other metals would oxidize in the extreme heat generated. The tubes are filled with the gas we desire to examine; the air-pump is then applied until the $\frac{1}{500}$ to $\frac{1}{700}$ part of the ordinary atmospheric pressure is left. In this state of attenuation the gas offers but slight resistance to the passage of the spark, intense heat is generated, and brilliant and beautiful light is emitted, of various colors, changing, of course, with the different gases employed.

Thus no known substance can defy the analytical powers of the spectroscope. Every known gas, metal, alkali, or alkaline earth, when thus acted upon by sufficient heat, gives out light peculiar to itself, producing a spectrum differing from the spectrum of any other known substance. Some substances absorb all the colors of the spectrum, with the exception of a single bright band, of which sodium and thallium give an example; others are readily recognized by a spectrum of many bright lines dispersed all over the prismatic field. Of this, barium, cæsium, and rubidium give an example. It is true that the degree of heat employed often modifies the spectra—not indeed as to the position of the characteristic lines and bands of each substance, but as to their number and brilliancy. Thus thallium, for example, gives one green band when evaporated by the heat of a Bunsen burner; but when it is volatilized by the far higher heat of an electric induction spark, we see, in addition, several bright

lines in the violet. The same is true of lithium, calcium, and others. But all these modifications are known, and are as much signs of recognition as every other modification can be.

And now let us consider the extraordinary delicacy or sensitiveness of this spectrum test, which by far surpasses any other test previously known to the analytical chemist.

Suppose we divide one pound of our common table salt, the chloride of sodium, into 500,000 equal parts; one of these parts, or minute atoms, we call a milligramme. In order to weigh out such a milligramme it is necessary to employ the most delicately constructed scales; the weigher himself must possess a high degree of dexterity, and he must proceed with the greatest possible care. But with this performance he has pretty nearly arrived at the limit of possibilities. But what if we should require of this experienced chemist to take one of these milligrammes and divide it again for us into 3,000,000 equal parts? Could he perform this feat? Certainly not. The human mind cannot conceive the minuteness of such an atom of matter. The spectroscope, however, does not recoil from that supernatural task. It demonstrates the presence of such an inconceivable atom with the utmost precision and certainty. The dusting of a book in the remotest part of this hall will set afloat a current charged with sodium chloride, which is present everywhere, and cause a flash in every flame that lights this room, and this yellow flash will yield the sodium spectrum, and thus reveal the presence of this metal.

This sensitiveness of reaction is not confined to the sodium chloride alone. The $\frac{1}{100}$ milligramme of barium chloride gives a very distinct reaction. Lithium reacts with the greatest promptness to the $\frac{3}{10000}$ part of a milligramme, strontium to the $\frac{8}{10000}$ of a milligramme, cæsium to the $\frac{1}{20000}$ part of a milligramme. Thallium, a powerful poison, as well as arsenicum, plumbum, antimonium and nickel, and many others, responds to very minute quantities of material also. This sensitiveness led to the discovery of five new metals, two of which were discovered by Bunsen. He obtained from forty-four tons of the waters from the spring at Turkheim 200 grains of a mixed salt, which the spectroscope showed to be cæsium and rubidium.

Interesting as this subject unquestionably is, I must leave its consideration for another more favorable occasion.

THE SPECTROSCOPICAL ANALYSIS OF THE BLOOD.

In the past, and before the spectroscope had entered into the service of medical jurisprudence, the microscope was to a great extent relied upon to demonstrate the presence of blood; at the same time the chemical arsenal was ransacked to furnish reactions for the detection of traces of blood. Whoever ponders over the painfully tedious and oftentimes faulty proceedings devised and carried out for this purpose, will not fail to hail and appreciate the modern methods of investigation. Chemical analysis is difficult, and often impossible with very minute traces of blood. The microscope can demonstrate blood only within comparatively narrow limits. So long as the blood-corpuscle can be obtained, and if it is a solitary one only, if well defined, the presence of blood can be made out; but when, by some chemical or other means, the cell form of the blood-corpuscle has been destroyed, when, by a process of disintegration, every trace of its outline has disappeared, when it has lost its characteristics as blood, and is only presented to us in extremely minute proportions as an amorphous substance, as a coagulated, physiologically altered pigment, the highest magnifying powers of the microscope become perfectly useless; it has arrived at the limits of its demonstrating power, and it delivers, without hesitation, the further solution of inquiries into the hands of the spectroscope; and it is here that its wonderful analytical powers prove of the greatest advantage, and their greatest usefulness in forensic medicine.

In order to fully appreciate these powers we must beforehand know what possible changes may be produced upon blood by chemical means, and in what manner the spectroscope responds to each particular change; and of these I am compelled to speak in the briefest possible manner.

Nothing is easier than to detect blood by the spectral analytical process; and the $\frac{8}{10000}$ part of a grain of the coloring matter of the blood is sufficient to give distinct prismatic reactions. Gorup Besonez says, whenever the peculiar blood bands appear, the presence of blood is unquestionably decided. The coloring pigment of the blood has been produced in crystalline form, and is known as cruorine, hæmoglobine, and hæmato-crystalline. This substance or these crystals possess all the optic properties of blood. Every change that blood undergoes, these crystals undergo likewise; and every modification of the spectrum, which is produced upon blood by chemical means affecting the integrity of the blood, is as faithfully reproduced in solutions of this hæmato-crystalline. These crystals are the true factors in a man's life. Through them the respiratory, the oxidizing processes within the economy, become possible. They are the sole element of the blood capable to absorb and attract oxygen from the air; they bind it loosely, and are at all times ready to part with it and to give it up to oxidizable tissues; and in exchange they greedily absorb carbonic acid, which they meet in the capillaries, as resultants from oxidation, and carry it back to the lungs, to be exhaled as effete material. Freed from carbonic acid, they again absorb all oxygen they meet in the lungs, and by the heart's action this vital gas is carried to every recess of the economy. These crystals are indestructible, preserving their crystalline structure and other peculiarities almost forever; and whenever, in the animal economy, their quantity is diminished, or their integrity assailed, there is corresponding reduction in the capacity for life and health. No putrefactive process can annihilate their integrity, and they can be demonstrated, it is said, in the mummy entombed thousands of years ago. They are double refractors, and possess the highest atomic weight known. Their stability and indestructibility admirably fit them to sustain the functions subserving animal life.

We will find that these qualities of hæmato-crystalline are of the greatest importance in medico-legal cases. When the outer form and integrity of the blood-corpuscles have been destroyed by the various means which the criminal may find within his reach, and when the microscope sends our questions back unanswered, it is yet perfectly practicable to produce the crystals, and the spectral analytic test furnishes us the much-coveted information in full amplitude.

Let me say here a few words regarding the inquiry whether we are able to tell in a given case whether the blood is human or not. We cannot with our present knowledge and means decide the question in a direct manner. The blood of all animals gives the same spectral appearances, they all have crystalline materials in their blood; even the lowly rain-worm yields hæmato-crystalline, which proud humanity has claimed as an exclusive inheritance. But we are not so helpless in this respect as we formerly were. We may at

times, by exclusion, give a negative answer. The microscope can tell us, where the size and form of the corpuscles differ from those of man, and whether such blood belongs to inferior animals, for example, the frog's blood; it can also inform us by the peculiar mode of crystallization what it is not. We know that human blood, and that of many carnivorous animals, crystallizes in prisms; the blood of the guinea-pig, of the rat, the mouse, and other rodents, crystallizes in tetraheders; the blood of the squirrel forms hexagonal tablets; hamster blood crystallizes in rhomboheders; and fish blood in fine prismatic needles. We can also obtain a vast deal of information, in forensic cases, from our knowledge that the blood of various animals differs in solubility. Human blood solves very readily; the blood of the monkey, the hedgehog, and others solves equally easily. The blood of the guinea-pig, the squirrel, the rat, and other rodents, on the contrary, solves with great difficulty. There is also a great difference in the sinking capacity of the corpuscles; horse blood, for example, possesses the greatest sinking power, forming rapidly a layer of blood-corpuscles in the serum when collected in a glass vessel. Some blood crystallize readily, others with far greater difficulty. These facts assist us to some extent in inquiries, when we have to pass an opinion on the identity of human blood.

OPTIC RELATIONS OF BLOOD AND ITS CRYSTALS.

When undiluted blood is spectroscopically examined, we observe a dark spectral field, relieved only by a tiny red line at the extremity of the red part of the spectrum. When the blood is diluted with water, several parts of the spectral field are cleared up in a well-known and regular manner, until, at a certain degree of dilution, two absorption bands become visible, arising out of the darkness at the orange and green part of the spectrum, between the Frauenhofer lines D and E. These are the bands given by oxidized or arterial blood. Examine them well. The first band, near D, is narrower than its mate, and darker; it is very distinct also in its outlines. The second band is broader, but less dark in color, and its outlines are blurred. When the process of dilution is carried further, these bands become paler, contract somewhat, and finally disappear. Oxidized or arterial blood has this spectrum from beginning to end, and presents no other modification; nor is there any substance known that will present the same spectral phenomena.

When the blood is deprived of its loosely bound oxygen, which can be done mechanically by the exhausting pump, or chemically by reducing agents, as we call them, such, for example, as ammonium sulphid., tin oxydul and others, we immediately witness a change in the aspect of the spectrum. "A change comes over the spirit of its dream." The two oxygen blood bands disappear and make room for a broad, dark band, occupying the space between D and E. This band is called the reduction band, or band of Stokes, who first saw and described it. Blood deprived of its oxygen is called reduced or deoxidized blood. It corresponds to the venous blood in the animal economy. We must, however, not suppose that reduced blood is tantamount to altered blood, for all that is necessary to restore its two oxygen bands is to shake the blood or the hæmato-crystalline solution up with air, or add some substance that will give up its oxygen to the blood. This process can be repeated many times with the same results. Remember these facts, for they are of the highest importance in the analysis of blood. Suppose we were called upon to analyze a specimen of blood, and we find it cannot be reduced by these means, would you not at once perceive that such blood must have been acted upon by some powerful agent, destructive to its functional integrity? Such an effect will be produced upon blood by carbonic oxide, by nitrous oxide, prussic acid, and other irrespirable gases. If a question should arise, whether a person died from asphyxia, and by what agency, I think we can satisfactorily answer the question by aid of the spectroscope. Where there are not any external signs of violence, the question is reduced to this: Is asphyxia the result of poisoning with irrespirable gases or not? Formerly, and even now, where experts are not fully up to the progress of spectral analytical processes, great stress was laid upon the dark color of the blood, engorgements in the lungs, arteries, and veins, and other like symptoms. We have learned by experience that these symptoms are far from being conclusive or characteristic, and they ought never to have any undue weight in a court of justice or in criminal proceedings, for we find the dark, sticky, or black fluid blood, and engorgements in lung, liver, spleen, veins, and arteries in many diseases, as pathological results, such as in narcotic or alcoholic poisoning, in cholera, in yellow fever, and septic diseases. Often, indeed, the phenomena of suffocation during life offer no specific marks, whatever may have been the mechanical causes producing it; and we find also often no characteristic post-mortem changes in the organs, because of the short duration of the violence employed, admitting of no demonstrable anatomical change to take place; in the blood, however, can be found the record of the characteristic changes peculiar to death from suffocation. When we find the blood of a person that died from asphyxia responding to the action of oxygen, and to the reduction test, we can safely say that he has not been poisoned by irrespirable gases. But when the reduction cannot be effected, consequently the blood is no longer in a state of integrity, it is also perfectly safe to say that the asphyxia is due to the action of some of the irrespirable gases, or some other poison, and we shall by and by show that the spectral test enables us to decide what particular gas or poison has been the cause of the asphyxia in a given forensic case.

When blood or a hæmato-crystalline solution is acted upon by any acid, except prussic acid, or by an alkali, or by alcohol, chloroform, and some other agents, it is split up, or chemolized, as we term it, into albuminous substances and a coloring matter which contains all the iron that is contained in the blood, but none of the sulphur of the original compound. This is hæmatine. It is important to remember this fact, for, as you here see, hæmatine is the product of decomposition or chemolysis, yet many text-books still repeat the error of the past, which called the undecomposed coloring matter of the blood hæmatine.

Hæmatine and its compounds can be crystallized. If a hæmatine solution is placed before the spectroscope we obtain a band peculiar to this substance, and quite distinct from the oxide blood spectra. There are a number of hæmatine spectra; the modification depends upon the agent that has been employed to separate hæmatine from the original compound. We here present some of the modifications.

Hæmatine has strong affinities for oxygen, also for carbonic acid. It can subserve, therefore, the processes of life to some extent, far less energetic however, than hæmato-crystalline. It can likewise be reduced by reducing agents. The spectral bands of reduced hæmatine, as you can readily see for yourself, offer great differences from those of Stokes' band of hæmato-crystalline.

Hæmatine is found in the human economy in disease only, especially in Addison's disease, in which the suprarenal capsules are affected. When it is therefore found, we know at once that it is the result of pathological conditions in the blood.

The one-banded hæmatine spectrum, resembling somewhat the band of Stokes, is produced by the action of potassium alcohol upon the blood. A comparison will show that this band is situated so as to have the D line for its centre, it is less broad than Stokes' reduction band, which stretches from D to E.

There is a five-banded hæmatine spectrum resulting from the action of acidulated alcohol upon blood. Here is a four-banded spectrum, produced by the action of sodium sulphate neutralized by acidified alcohol given by Dr. Thudicum.

A new substance has also been obtained by Dr. Thudicum, from blood, called cruentine. It has also quite a number of spectra. Cruentine can also exist in a double state of oxidation, that is to say, it can be oxidized and deoxidized at pleasure. A few of these spectra may be seen on the diagram. Be pleased to compare now all of these spectra, and you will find that they differ from each other quite sufficiently to make a mistake nearly impossible. In very doubtful cases we may resort to actual measurement; means to this end are provided for in all good spectroscopes. You will agree with me, that the harvest which the spectroscope has gathered in the analysis of blood is very abundant, and of the highest importance in forensic medicine.

The man who is called upon to act as an expert in medico-legal cases must be familiar not only with the chemical or microscopic tests, but ought to possess a thorough knowledge of the various spectra of blood, and no blood analysis ought to be considered perfect and beyond assailability which ignores or is not verified by the revelations of the spectroscope.

Having placed before you the most interesting optic changes to which blood can be brought by chemical as well as physical means, we are now well prepared to understand how this analysis can be utilized in the detection of crime.

The "man of blood," after he has committed his deed of darkness and death, what is he most likely to do? The history of medical jurisprudence is full of information on this head. He will naturally try to efface the traces of blood, the terrible "tell-tale drops." For this purpose he will use almost anything at hand; water, soap, alcohol, acids, alkalies, oils, and others. But science can foil him in his efforts to evade the consequences of his crime. The indestructibility of the hæmato-crystalline leaves traces and landmarks perfectly intelligible.

We can call down as witnesses and as judges the fiery messengers of heaven to lay bare his deeds of blood, and as the genial trembling sun ray filters brightly through the analyzing prism, it reveals to us the presence of blood, it tells us even of the means he has employed to efface his crime. Light and science are the terrible avengers from which he can never, never escape; they follow him with never-tiring step, until they grasp him in their toils and give him over to justice and retribution.

When the blood itself is found, even in very minute quantities, upon the floor, the wall, the clothing, the instrument of death, its demonstration by the spectral analytical method is perfectly easy and reliable. We scrape the wood, the wall, the weapon in order to collect all the traces we can, then we dissolve it carefully in a few drops of water, perhaps add a trace of ammonia, and submitting it to a micro-spectroscopic examination we will get a definite optical reaction. If maceration has been used, we still often obtain sufficient blood for spectroscopic analysis to establish our case. Where boiling has been used, the hæmato-crystalline has been coagulated, for it is simply a crystallizable albuminoid, and in this state it will not give any longer the two blood bands at D and E. We must then act upon the coagulum with acids, and try to obtain the hæmatine spectrum. Where acids, alkalies, soap, alcohol, and other agents have been employed, we may obtain the hæmatine or the cruentine spectra, and thus demonstrate blood. This has been done successfully in several very interesting medico-legal cases on the continent. In these examinations the spectroscope renders us the highest possible services, whilst the microscope is unable to give us any response whatever.

But with these services its usefulness in this direction is by no means at an end. When blood is acted upon by heat and acetic acid, minute crystals, table-shaped, are obtained, known as hæmine. They can be obtained from hæmatine also. The crystals have frequently demonstrated blood from very scanty traces. Here the microscope again becomes useful. It does not, however, at all times crystallize readily. Under the spectroscope hæmine gives a band far out on the red part of the spectrum, where we meet also one of the bands of chlorophyll; it lies at C.

Another substance found in old extravasation of blood within the economy was described by Virchow and named by him hæmatoidine. It is probably modified hæmato-crystalline; its peculiar and characteristic spectrum has been given by Preyer. It is of value in forensic medicine to determine whether an extravasation of blood, found at post-mortem, is of recent date, or has been there for some time.

The spectrum of hæmatoidine is here shown; it is a chloroform solution of hæmatoidine; its bands are found in the blue and violet part of the spectrum, one well-marked band between C and F, and another between F and G. They require the maximum illuminating power, magnesium light or that of oxycalcium light.

Spectral analysis will also assist us to determine in forensic cases whether blood spots found upon wood, stone, furniture, clothing, weapons, plaster-of-Paris walls, are of recent date or old. This inquiry has come up recently in Boston, in the well-known case of Alley, who stood before a jury charged with murder. The State medical expert stated in his direct medical examination that old blood spots could not be distinguished from blood spots of recent date. I have published my views in Dr. Brown-Séquard's Archives of Scientific and Practical Medicine, No. 5, and I think I have proved that the expert fell short in his testimony, and placed himself at variance with the accepted and exact results of spectral analysis.

When a solution of old dried blood is prepared and properly concentrated and spectroscopically examined, we behold one black band coincident and overlapping the C line. The rest of the spectrum is all dark. I have shown you, this is not the case when fresh blood is examined; then you find simply a red band near C. This absorption band at C is characteristic of old blood. Having seen and examined this band, and diluted our solution with about fifty per cent. of water, the spectrum clears up and gives us in addition to the band at C our two cheerful bands, so well known and so often alluded to, but yet beyond these three bands the spectrum is still overcast. Let us set our solution aside for twenty-four hours and then examine it again, and note the remarkable and characteristic

change that has taken place. At first, when only one band in red was visible, and all the rest of the spectral space covered with darkness, it seemed as if the hæmato-crystalline had lost its power to absorb oxygen from the air; it seemed as if by age a complete necrosis or death of the blood had ensued; but now, behold! the two cheerful bands betoken a resurrection from death, typical and beautiful to behold. A further dilution brings out these bands in all their old, bold outlines; but the band at C disappears gradually and is seen no more. Set your solution aside for another twenty-four hours in a closed vessel, and then examine spectroscopically. You will find the three bands have disappeared, and you now behold the broad reduction band between D and E. What has caused this change? I will tell you. Your solution has entered a putrefactive process, evolving sulphuretted hydrogen and other gases of decomposition, which in their turn have consumed all oxygen. You have indeed a fair specimen of reduced oxyhæmato-crystalline before you.

To show you that this is precisely the case, take your solution and shake it well up with air. On spectroscopic examination you will find that the reduction band has disappeared, and our old welcome oxygen bands have reappeared between D and E. They look as beautiful and as well defined as ever. What has now taken place? Simply this: your blood solution has again exercised its life function of uniting with the oxygen of the air, the deoxidized blood has become oxidized, it has saturated itself with the staff of life, showing that after long years of death apparent, the hæmato-crystalline has preserved its integrity and its capacity to renew its vital mission when brought again in proper condition.

We have now seen how, by the aid of the spectral analytical process, we can demonstrate blood, when altered in almost any possible way and manner, and that we have the advantage over the criminal in his efforts to hide his crime. But how, if he has resorted to fire to burn up his victim? Can the spectroscope help us then? It can, gentlemen. I present you here this beautiful spectrum of many light and dark bands. It is the spectrum of ash from human remains. To see this spectrum well the ash is moistened with a little diluted chloric acid and then exposed to the heat of a Bunsen's burner, or acted upon by an electric induction spark. A very ingenious apparatus has been invented by Mitscherlich. In a narrow glass tube, closed at one end, and the other end bent to a right angle, is placed the substance in a fluid condition, which is to be analyzed. The open end is filled up with a bundle of fine platina wires, properly secured. By means of capillary attraction the fluid in the inverted tube is sucked up, and is consumed rapidly, heat being supplied by a Bunsen's burner or other means. As the metallic or mineral solution is thus consumed, their spectra can be quickly and enduringly observed and studied. There is another very ingenious apparatus, invented by Becquerel, which I shall describe presently, and another, a very beautiful apparatus, invented by our countryman, Dr. Morton.

The spectrum from the ash of human remains is one of the most beautiful we can behold. It is not, however, a simple spectrum, but a combination of several spectra. This also is of great practical value in spectral analysis. In the present case the spectrum is made up of six different spectra, which are readily pointed out. They belong to so many elements found in the human system, to wit, sodium, potassium, lithium, cæsium, rubidium, and calcium.

We learn, then, from the ash of human remains, that there are six metals in its composition; iron and magnesium do not appear in this spectrum.

POISONS.

All poisons, except a few vegetable narcotic poisons, and their alkaloids can be discovered by the spectral analytical method. The spectral relations of a number of vegetable poisons and their alkaloids have been studied, but those of many others are still awaiting investigation. Spectral analysis is but a decennium old, is therefore yet in its infancy, and it has not therefore accomplished all, within the range of forensic medicine, that it may accomplish in the future.

When called upon to analyze a metal or mineral poison, we must bring it to a high state of incandescence by a Bunsen burner or by the electric arc. You have all heard of the manufacture of Bessemer steel; by this process several tons of cast-iron are converted into cast-steel in less than twenty minutes. In this process oxygen is employed in order to burn out all the carbon and all the silicon of the cast-iron, and the heated gases issue forth in a flame of the furnace. This flame varies in appearance, as the carbon and silicon disappear, and it is of the utmost importance to know the exact moment when all the carbon and silicon is burned out, otherwise the entire cast is lost. The spectroscope will point out when this exact moment is reached, by a peculiar spectrum from the flame, when the access of oxygen to the mass must be cut off. Our procedure is similar. The spectroscope analyzes the flame of each metal and mineral, and gives us the peculiar and characteristic spectrum of each. Good chemists know these spectra well; the spectroscope has become an indispensable aid to them to determine the nature of metallic ores and substances, and in every well-arranged chemical laboratory you can find charts containing the spectra of the various metals and minerals.

The salts of metals, too often used for poisoning purposes, are given or taken in fluid form, such as arsenious acid, corrosive sublimate, antimony, lead, copper, and others, and we are called upon to demonstrate them from the organs and tissues of the human economy. Here we must proceed in a different way. A considerable number of these salts may be recognized at once, according to Thudicum, by holding a small piece of the tissue into the colorless flame of a Bunsen burner; the flame is analyzed by the spectroscope; or we may place the fluid in Mitscherlich's apparatus; or, still better, we may employ the apparatus devised by Becquerel, consisting of a series of glass tubes into which the positive and negative electrodes of a powerful electric battery are introduced. The electric discharge passes through the liquid we desire to analyze, and as the induction spark passes from pole to pole, the substances are evaporated which are present in soluble form in the solution. The effect of the inductors can be so regulated that the interruption of the current, and consequently the electric sparks, follow in such rapid succession that the spectrum becomes quiet and almost stationary, the apparatus works uninterruptedly for hours like a heating apparatus; for, during all this time, with the substance we desire to analyze under these favorable conditions, we can quietly observe the steady spectrum, and ascertain by it the nature of the substance to be analyzed.

The time allotted to me precludes the possibility to go into a more extended detail. Becquerel's apparatus is well described by Becquerel himself and by H. Schellin in his work on spectral analysis.

Viewing, then, the progress we have made in this

direction, it is to be regretted that in the Wharton trial the analytical powers of the spectroscope were not brought in requisition. This trial has shown us the wonderful mystification of the old analytical methods. The contradictions were disheartening and humiliating to the medical profession. There could not have been an assailable point to the answer which the spectroscope would have given to the question, whether the substance found was arsenicum, antimony, or gelseminum. The possibility to work with minute quantities would have made it convenient to observe the spectrum for many hours, and would have given an opportunity to many to verify and observe the revelations of spectral analysis.

POISONOUS GASES.

I regret that time enough is not at my disposal, and that therefore I can bestow but a brief consideration upon the usefulness of the spectral test in cases of poisoning with irrespirable gases. Of these, poisoning with carbonic oxide or charcoal gas happens most frequently. Whether in a given case this gas has destroyed life, or whether suffocation from other causes has taken place, will often be a question for the medical jurist to decide. The facility with which it is generated; the certainty with which it acts its fatal results upon the animal economy; the gradual and gentle manner with which it creeps over its victim, producing effects upon the brain, rather agreeable than otherwise, until the entire blood mass is saturated with its treacherous vapors, and the sleep of dreams passes insensibly into the sleep of death; the facility with which traces of this gas can be removed by simply admitting fresh air into the chamber of death; the absence of disturbing influences upon the corpse, all these circumstances admonish us, that to detect poisoning with this gas we must avail ourselves of science's most advanced resources. The post-mortem appearances of persons destroyed by this gas are by no means characteristic. We find the blood of a purple-black color, engorgement of arteries and veins, clots in the heart, and other changes in the lungs, liver, and other organs; but these are found in many other diseased conditions also, and are by no means peculiar to poisoning with carbonic oxide alone, and every intelligent jury would hesitate to render upon such feeble testimony, a verdict of death. Carbonic oxide gas, as well as all other irrespirable gases, exerts its destructive force upon the blood specifically; it alters it in a manner that it becomes unfit to carry on the vital processes, and it is therefore but logical to suppose that we must find in the blood the traces of this poison.

And so it is indeed. We have spoken of the crystalline material of the blood, of its being so eminently adapted to the purposes of life, we have admired its many wonderful qualifications and its beautiful spectrum; but this substance has its weak points also. It has the most fickle disposition imaginable. Oxygen is its natural companion, so also is carbonic acid; but it runs away with many of the irrespirable gases like a fickle woman with a preferred lover, without remorse or compunction. It unites with peculiar energy with these poisonous gases, and forms combinations and unnatural alliances with them so firmly and tenaciously that a subsequent separation becomes almost a matter of impossibility. So firm is this unnatural union, that they go together even through the crystallizing process, and we are able to procure crystals of all these combinations. No wonder, then, that we hail with satisfaction the performance of the spectral analytical test, by whose aid we are able to determine and detect the agent that causes asphyxia.

In the case of carbonic oxide two bands, very much resembling the two oxygen blood bands between D and E, are seen. On exact measurement, however, we find differences in position. But when blood saturated with carbonic oxide is acted upon by reducing agents, it is found that they have no power of reducing it. The broad Stokes band cannot be produced. This irreducibility is by Gamgee considered decisive in forensic medicine, showing that death has taken place from the inhalation of carbonic acid gas. But we have no other means to show this irreducibility than by the spectral analytical process.

PRUSSIC ACID.

Hæmato-crystalline has the same fatal affinity for prussic acid. We find the blood of a brown color, and the peach-blossom smell is so decided, especially immediately after death, that we may conclude without spectroscopic examination that death has resulted from prussic acid. It is, however, a singular fact that this subtle poison does not decompose hæmato-crystalline into hæmatine. We possess ample means and optical phenomena to decide the question of poisoning by this gas by the spectral analytical test. It is an interesting chapter indeed, but its details must be passed over this evening.

SULPHURETTED HYDROGEN.

Concentrated sulph. hydrogen gas, when inhaled, is a rapidly destroying poison to animal life. It has been used for homicidal purposes. If a stream of this gas is passed through a blood solution, it rapidly causes the hue of the blood to change into a dark brown color. Experiments made by Hoppe Seyler upon dogs and rabbits show the terribly destructive effects of this gas; even when mixed with twice its volume of oxygen it produces fatal consequences. The rehearsal of the symptoms is painful to listen to. The dyspnœa and convulsions are fearful in character, the glaring, protruded eyes, the distortion and paralysis are rapidly produced. This gas is around us; it is generated whenever animal or vegetable matter undergoes putrefactive transmutation; it reaches us from our defective closets and ill-conditioned sewerage. If long inhaled, even in smaller quantities, it creates zymotic disease, favors septic processes. The latest investigations claim that the sulphur is separated in the economy, favoring coagulation and the formation of embolic material.

The action of sulphuretted hydrogen upon the blood cannot be definitely and absolutely proved by chemical means, and in forensic cases its action can only be fully and satisfactorily substantiated by the spectro-analytical test. Blood saturated with this gas has its definite spectrum. It is the band in red, of which we have already spoken as being peculiar to old blood stains, and it is possibly the action of this gas, which is evolved during the process of drying up, to which this band owes its presence, and which betrays its evanescent character when such blood is brought to a state of watery solution, and then exposed to the vivifying effects of oxygen.

But how is it possible to introduce this offensive gas into the system for criminal purposes? It may be injected into the rectum and intestines, where its action would be as deadly as if inhaled by the lungs, and yet we would not find any direct evidence of this gas in this organ.

PHOSPHURETTED HYDROGEN.

Like the foregoing gases this gas is also highly poisonous; animals exposed for a very brief period die, even if they afterwards have been exposed to fresh

air and oxygen. Its presence can be readily detected, by chemical means, through the breath of the animal. A paper moistened with a solution of nitrate of silver held before the mouth of an animal thus poisoned will show the formation of silver phosphate.

It acts equally poisonous when injected into the rectum. The prismatic test shows the presence of this gas by peculiar and characteristic modification of the spectrum, aided by certain chemical reactions, and this test may be employed whenever the chemical tests are doubtful or unattainable.

I have to pass over the action of anæsthetics and their peculiar action upon the blood, and also the *resumé* of what progress has been made to detect by the spectral analytical methods the presence of alkaloids, such as strychnine, morphine, veratrine, atropine, and many others. It would require far more time than we have this evening. Perhaps I shall have an opportunity to speak to you on these subjects at a future occasion.

I have thus laid before you an outline of the utility and importance of spectroscopic analysis in forensic cases.

I hope I have in some measure justified the interest you have taken in the subject. I hope also to have been able to impress you with the great responsibility resting upon the medical expert who is called to decide in cases of life or death.

There is no doubt in my mind that many a life has been sacrificed by medical testimony, lacking the breadth and depth and the foundation of true science. I have still less doubt that many a hardened criminal has escaped conviction and well-merited punishment, from a deplorable ignorance of scientific facts, which now are happily at our command. It is evident, and held so by the best physicists abroad, that no blood examination is perfect and unassailable that is not verified by spectral analysis, and that no conscientious verdict should be given, and judgment of death pronounced in cases of poisoning, without the positive proofs attainable from the same source. If I mistake not, the aim of your Society is improvement of medico-legal knowledge, in conformity with the spirit of scientific progress, and I have no doubt you will see to it that the exceedingly important information, which in an imperfect sketch I had the honor to lay before you this evening, shall not be discarded in the courts of justice where your influence extends, alike important to the accused as to society and the State. If I have by my discourse thrown any light on the modern mode of investigation, and stimulated you to renewed efforts, I shall be amply repaid for my labors.

A CASE OF EARLY MATERNITY.

By E. A. GOODRIDGE, M.D.,

FLUSHING, L. I.

The following notes of a case of early pregnancy, which came under my observation during the summer and autumn of 1873, will probably be of general interest to the profession, and I accordingly give them to The Record for publication.

G. J., a well-developed colored girl, born in this town on the first day of March, 1861, and, therefore, 12 years of age in March, 1873, was brought to my office early in August of the latter year, for treatment on account of abdominal enlargement, which the mother, a woman of more than the ordinary intelligence of her race, thought to be a "dropsy." Aside from the enlargement the girl was in perfect health. Suspecting that all was not right, I sent her away without treatment, expecting the case would determine itself in a short time. I next saw her about the middle of September. There was no doubt at this date as to her condition, and she confessed having had intimacies with a young white man of the neighborhood. She also gave me her age as indicated above. The statements of the mother and other friends likely to know her age agreed with that of the girl, and with my own knowledge concerning her. She began menstruating shortly after her eleventh birthday, and continued to do so regularly till the month previous to her twelfth birthday, when conception probably took place. Gestation was completed without the occurrence of any functional derangement worthy of note. There was no œdema whatever or other evidence of renal disease.

Labor came on at 3 A.M. of November 25th, and advanced regularly through the first stage, which lasted five hours, the head presenting in the left occipito-iliac position. Strong expulsive efforts soon after began and recurred with precession for two and a half hours, when delivery was effected, the whole duration of the labor having been seven and a half hours. The infant was a female weighing seven pounds. There was a copious lacteal secretion on the third day, after which time the mother continued to supply sufficient nourishment for the sustenance of her child.

The mother's age at the time of delivery was 12 years 8 months and 25 days.

CASE OF TRAUMATIC TETANUS

TREATED WITH

PHYSOSTIGMA VENCUOSUM.

Communicated by PHILIP S. WALES,

MEDICAL INSPECTOR, U. S. N.

I am indebted for the notes of the following interesting case to the courtesy of Dr. Fisher, in whose practice it occurred.

David Boyle, aged 8, residing at the corner of 10th and F streets, Washington, fell from a small tree on the 28th of August last, causing a compound fracture of the carpal and of the radius at its epiphysis. The lower fragment was reduced, with but little difficulty, by slightly enlarging the wound. The soft parts were then brought together by strips of adhesive plaster, the arm placed in a comfortable position, and cold water dressings applied. The limb became largely swollen up to the shoulder and suppuration was established. The former dressings were then discontinued and linseed oil and carbolic acid substituted.

September 5.—Dr. Wales was called in consultation in the evening; the patient was now apparently doing well; suffered no pain, and the swelling of the arm had subsided.

September 6.—This morning the patient presents the unmistakable physiognomy of tetanus, with beginning stiffness of the muscles of mastication, inability to open the mouth, and contraction of the cervical muscles. In consultation it was determined to give the Calabar bean a fair trial. With this view a hypodermic injection of one-third of a grain of the extract (Trommsdorff's preparation) was made over the right mammæ, and, ten minutes later, a third of a grain, dissolved in glycerine, was given by the stomach. It was thought that a very decided impression had been

made; the pupils were contracted to a diameter of one-sixteenth of an inch, but when the eyelids were opened to a bright light they *expanded*. In two hours the above-mentioned dose was repeated. The pupils were now less mobile when exposed to a strong light. The effect of the drug upon the skin could not be correctly appreciated, as the patient was bathed in a copious perspiration before it was administered. The amount of urine was increased; pulse 125. In the evening the hypodermic injection was again repeated and ten square millimetres of Squibb's calabarized gelatine given by the stomach. The latter dose was repeated every three hours during the night. *7th.*—Both Dr. Wales and myself felt convinced that the medicine has had manifest beneficial effect. The pupils were contracted, the chin could be voluntarily depressed as to separate the teeth an inch. There has been but three paroxysms since the administration of the bean and these of very short duration, and the muscles were not so firmly contracted. While we were present a violent paroxysm ensued which curved the body a little in the opisthotonic position; but this only lasted a minute, and during the time the respiration was arrested, pupils widely dilated, lips blue, and the pulse, which had hitherto reached 135 beats, came down to 90, when the spasmodic exacerbation passed off, the pupils resuming their contracted condition and the pulse its former frequency. We repeated the calabarized gelatine; in two hours another paroxysm of short duration occurred and the patient died, asphyxiated, at 12 meridian.

Original Lectures.

NOTES UPON CASES PRESENTED AT THE CLINIQUE

OF

J. M. DA COSTA, M.D.,

JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

(Phonographically reported for THE MEDICAL RECORD.)

CASE I.—CHRONIC DYSENTERY.

GENTLEMEN:—The first patient presented to-day is Mrs. M., æt. 46. She has been sick eight weeks. The first thing she noticed that was wrong with her was passage of blood from the bowels. During the last eight weeks she has passed blood in small quantities from the bowels, and she estimates that she has six or eight discharges every twenty-four hours, and these are accompanied by a bearing-down sensation.

This part of the history suggests close inquiry regarding the state of the alimentary canal.

We now find that she has suffered from hemorrhages previous to the present attack. Two years ago she had her first attack of hemorrhage; sixteen months, the second attack; and this is the third attack.

In the interval between the hemorrhages her health has been poor; there is a general sense of weakness in the bowels, and continued diarrhœa.

We have in this case, then, a persistent looseness of the bowels, with occasional hemorrhages of considerable severity; and there is history of disease of the bowels antedating hemorrhage. There has been loss of flesh and strength; the patient presents a pale appearance, but has no fever at the present time. Pulse weak, 80 per minute. Tongue pale, not coated. There is general abdominal soreness, but the particular region of soreness is along the course of the large bowel, ascending, transverse, and descending colon. The patient especially winces when pressure is made along the course of the descending portion of the colon.

It is quite evident that we have here a case of chronic alteration of the mucous membrane of the large bowel, and, most likely, ulceration. To be quite certain of such a case, it must be positively determined that no such thing as hemorrhoids are present, which might possibly give rise to such amount of irritation, and also account for the passages of blood. This question has been fully investigated by my clinical assistant, who assures me that piles are not present.

We have no other supposition, therefore, but that we have to deal with disease of the bowels, especially of the large gut; and that there is ulceration of the mucous coat of the large intestine in places, which occasions the hemorrhage. In other words, the case is one of *chronic dysentery*.

Prognosis.—With regard to prognosis, a good deal depends upon the length of time it has lasted. The existence of the disease for several years, and the recurrence of hemorrhage, does not give us the most favorable case for treatment. It will be our endeavor, however, to remove this morbid condition of the mucous membrane of the bowel and the ulceration.

Treatment.—We might, in this case, prescribe bismuth in large doses; and it is a remedy which sometimes can be prescribed with great benefit.

I have also seen good results, in this class of cases, from the use of oxide of silver; and this is the treatment which will be adopted in this case.

The oxide of silver is unquestionably preferable in this case, because there has been such recent hemorrhage. The patient has already been taking the remedy in one-grain doses three times a day, and the treatment therefore, thus far, will be continued.

The use of opium, by means of suppositories, will materially aid in restraining the frequency of the movements from the bowels and the excessive discharge. The patient will therefore receive, at bedtime, a suppository containing one grain of opium, which will be repeated in the course of the night if the discharges are excessive.

The diet is also a question which claims our attention.

A plain, nourishing, and easily digested diet is alone proper. It may consist of arrow-root, rice, undone meat, beef-tea, milk, and only a limited supply of vegetables.

CASE II.—CHRONIC DYSENTERY.

Mrs. B——, æt. 51. This woman has ten or twelve passages during the day, and about the same number during the night. The passages are accompanied with a great deal of bearing down; have a slight admixture of blood; but there has been no hemorrhage, as in the preceding case.

The patient has lost flesh; no fever; tongue slightly coated. First attack. There is more or less of vertigo and pain in the side. There is slight soreness over the abdomen. The present condition has lasted about six months. This case, gentlemen, is also evidently one of chronic dysentery in which there are many movements from the bowels, but the discharges contain but little blood.

As regards the early history of the case, we have not many fixed data. The patient is of the opinion that her sickness is due to hard work and exposure.

Her occupation (apple-woman) is such as necessitates considerable exposure to atmospheric vicissitudes,

and her supposition is very likely correct. This class of people get thoroughly chilled, are constantly upon the move, which condition of affairs has doubtless given rise to intestinal trouble that has lapsed into this chronic condition.

Upon farther examination we find that the patient has great debility and disposition to sweating, but no cough. Physical examination of the chest determines that the respiratory murmur is normal, hence we may exclude any tubercular element from the case. There is no cardiac disease. We now have these two cases of chronic dysentery together. Here is a case which might be treated in the same manner as the preceding one; but I am of the opinion that, with this patient, the bismuth will do better than the oxide of silver.

In this case we have no element of hemorrhage or ulceration, but what we have is probably a chronic catarrhal condition of the mucous membrane, a chronic swelling and thickening of the mucous membrane of the bowel, and to relieve this condition the bismuth is very valuable. We shall therefore make the following prescription in this case.

℞. Bismuth subnitrate..... grs. xv.
Dover's powder..... grs. iij.
M.

Administer such a powder four times a day. If the discharges are excessive, and not controlled by the opium contained in the powders, the occasional use of an opium suppository will be of great service. The diet should be similar to that recommended in the preceding case.

CASE III.—PNEUMONIA.

James C——, æt. 5. This boy has been sick three days. The thing complained of by the mother is that the boy cannot get his breath. He had a somewhat similar attack two years ago; but, apparently, recovered perfectly. Since three days ago he has suffered from oppression in breathing, has been feverish, has had a tight, oppressive cough, but no expectoration. He is unable to lie in bed on account of the difficulty of breathing.

Physical Examination.—Great heat of skin; tongue coated; pulse, 120; respiration, 32.

Percussion, anterior: Dulness upon left side slightly marked at apex; becoming distinct at the middle portion and downwards.

Posterior: Dulness more marked over lower portion of chest upon the left than anteriorly, and there is considerable difference between the right and left chest posteriorly.

Auscultation: Over the region of dulness upon the left side moist bronchial breathing heightened in pitch, and evidently distinctive of consolidation.

At the upper portion of the lung it is to be noted that there are some subcrepitant râles, but not the evident consolidation that is found at the lower portion of the lung.

Anterior: At the lower portion of the left lung there is heard a harsh murmur, but not the distinct tubular respiration which is heard posteriorly.

Over the right lung, posteriorly, at the inferior angle of the scapula, and along the edge of the scapula, there is also marked tubular respiration.

Anteriorly, there is no dulness upon the right side, nor harsh murmur, as heard upon the left side. This case, gentlemen, is interesting in the following particulars:

First, it is a pneumonia; second, it is a case of double pneumonia; and third, it is a case of pneumonia affecting the posterior portion of the lungs almost exclusively. The bronchial breathing does not extend anteriorly at all upon the right side, only to a very limited extent upon the left side, and there is not true tubular respiration; hence there is scarcely any consolidation anteriorly upon the left, and none at all upon the right side of the chest. It is a case, then, in which nearly all the pneumonic process present is limited to the posterior portion of the lungs, the anterior portion of both lungs comparatively escaping. This is a rare occurrence.

Again, it is a true *lobar* pneumonia, a true consolidation. It is not the common form of pneumonia which occurs in childhood.

The most common form of pneumonia in childhood is broncho-pneumonia, and is characterized by only very little consolidation; there is not the marked tubular respiration and the phenomena we have here. This case is like the pneumonia of adults, excepting the peculiarity that it affects so purely the posterior portion of the lungs. It is like the pneumonia of adults in being a true consolidation of pulmonic texture. This is a point worthy of careful consideration. I am of the opinion that true pneumonic consolidation, like that which occurs in the adult, is of much more common occurrence in children than is ordinarily supposed.

In the matter of diagnosis it is doubtless frequently overlooked, from the fact that quite commonly too much stress is laid upon percussion, and too little stress is laid upon auscultation.

Our time does not permit the farther discussion of this question; but the fact is before us. We have here a case of pneumonia such as occurs in the adult, and it is a case of double pneumonia affecting a section of each lung.

Treatment.—The first thing to be done is to place the patient in bed. While dismissing him, it may be worthy of notice that we may have a pneumonia *without* cough or expectoration, and nothing but the physical signs will give the true meaning of the symptoms which may be present in the case. When the patient is placed in bed he should be thoroughly dry-cupped. If he were not a pallid, weak child, ill-fed, and with nutrition at a low point, leeches or wet cups would be applied to the chest. As it is, dry cups only will be employed. Internally, he is to take a powder containing the following remedies:

℞. Digitalis..... gr. ⅛.
Dover's powders..... gr. 1.
Nitrate of potash..... grs. iij.
M.

There is but one defect in this prescription, and that is with regard to the quantity of ipecac it contains; that is not so large as we could wish, hence we will add to the above powder one-sixth of a grain of ipecac. Administer one of these powders every three hours.

What does this prescription mean? We have the digitalis to control the circulation; we have the ipecac to act upon the secretions, and especially upon the secretions of the pulmonary structure, bronchial tubes, and air-passages; we have the nitrate of potash, which acts upon the skin, and at the same time is among the remedies which are used in the treatment of pulmonic consolidation.

The entire action of the powder is to promote secretion from the lung itself, and thus lead to expectoration; and in the nitrate of potash we have an agent which is in some degree a solvent and an internal antiphlogistic. The small amount of opium in the Dover's powder will not interfere with the general

outline of treatment, and will relieve the general discomfort of the patient. Good food and plenty of milk also form an important part of the treatment.

CASE IV.—CHRONIC VOMITING.

Mrs. B——, æt. 39. Has been sick four years. Occasional attacks of vomiting are almost the only symptom of which she complains. These attacks occur at intervals of varying length, and usually last three or four weeks. The present attack has continued longer than usual, it now being seven weeks since it came on. The patient ordinarily has three or four such attacks during the year, and while suffering from them everything that is taken into the stomach is soon ejected, except perhaps tea and coffee, and not infrequently these articles also are vomited. It is also vomiting unassociated with eating. In the interval between the attacks of vomiting the patient suffers more or less from indigestion, more or less from constipation, sometimes three or four days passing without a movement from the bowels. The patient is unable to trace these attacks to any cause.

We have here the history of some gastric disorder that has lasted four years. The leading features of the case are—weak digestion, constipation, and aggravating attacks during which vomiting is the prominent symptom. The next question that arises is, *What* does the patient vomit? The material which is vomited is mostly mucous, and has a disagreeable odor. This material is vomited irrespective of the presence of food in the stomach. The tongue is white, fully coated, and carries indentations of the teeth upon its sides. There is no pain upon pressure over the stomach or in the back. Uterine disease may be excluded, and the function of menstruation is performed normally.

Three are one or two suppositions with regard to the case before us. Persistent irritability of the stomach, accompanied with vomiting, suggests the presence of ulceration; but this case is wanting in the pain, vomiting of blood, and the continuous character of the symptoms which accompany ulceration. It is probable that the true solution is to regard the case as one of *atony* of the stomach, associated with chronic gastric catarrh. There is probably a catarrhal swelling with altered secretion from the mucous coat, together with atony of the organ. The vomiting without pain suggests this.

The anterior history—that of an old dyspeptic—and the vomiting of large quantities of offensive mucus also point to the same condition. There may be present in the material vomited some such substance as the *sarcina ventriculi*, and that requires a microscopical examination to determine its presence.

We shall therefore regard the case as one of chronic gastric catarrh, and treat it accordingly.

In this particular case, in which there is absence of marked soreness or inflammatory irritation, looking upon it rather as one of chronic catarrhal condition of the mucous membrane with altered secretion, the remedy which suggests itself to me as most likely to allay the vomiting and change the character of the discharge is an *acid*. I admit that if this case had all the evidences of chronic inflammatory action, we should not resort to acids to control the vomiting; but taking the character of the case before us, I believe that acids will prove of service. We shall therefore administer muriatic acid in a solution of pepsin as follows:

℞. Liq. pepsine..... ʒi.
Acid muriatic dil..... gtt. v.
M.

Administer such a dose four times daily. The diet should be restricted to skim-milk, endeavoring by using small quantities of this to restore the lost digestive tone. When the patient can retain the milk without vomiting, we may resort to other diet, but this is sufficient for the present. As a result of long experience I have found that in these cases of prolonged irritability of the stomach a blister over the epigastrium is of great service. We therefore recommend a small blister to be placed over the epigastrium in this case.

The constipation is also to be removed, if possible; and for that purpose I suggest the following pill to be taken every night, or every other night, according to the necessities of the case:

℞. Aloe soc..... gr. ½
Rhei..... gr. ij.
Ext. belladonna..... gr. ½
M.

The patient will return in one week.

Progress of Medical Science.

LEAD AS A CONSTITUENT OF ENAMEL THE CAUSE OF CHRONIC POISONING.—The patient, a corpulent man, 36 years of age, suffered at one time from a severe attack of typhlitis. From this, however, he had recovered some time, when he began to complain of intense pain in the abdomen, and was considerably emaciated in a short time. His face became yellow, and he continued to suffer from fulness and pain over the cæcal region, and shooting pains through the breast and stomach. Percussion over the abdomen was dull, sleep and appetite disturbed; pulse and temperature were normal. At first typhlitis was suspected, and a dose of castor-oil administered, after which a passage was obtained. The fæces consisted of large boggy masses. The stomach became reduced in size, but the pain still continued, extending over the back and through the extremities. The stomach was tense and contracted, and on applying pressure the pain was *not* increased, but vomiting was produced almost instantly, consisting of green masses. The bowels were very constipated, and only moved when a drastic cathartic was administered. After four weeks had elapsed, a slate-colored band made its appearance on the gums, and bladder-tenesmus became apparent. Upon this appearance a diagnosis of lead poisoning was arrived at. Soon after this the sister of the patient was similarly attacked.

The source of the lead poisoning was shortly afterward detected. The jar used as a receptacle for vinegar was found to be much corroded, and nearly all the enamel was removed by the vinegar. The vinegar possessed a disagreeable sweetish taste. One "schoppen" was placed in the jar for ten hours, when on examination 0.09 grm. of metallic lead were found. The jar, when full of vinegar, must have contained, after standing ten hours, 1.8 grm., and after standing one week must have contained 30.24 grms. of lead in solution. About one jar of vinegar was consumed per day, which was quite sufficient to produce lead poisoning in the family.

RETROGRADE METAMORPHOSIS OF THE GRAAFIAN FOLLICLE.—The following results are summed up by Slavjansky as obtained from his anatomical and physiological researches:

1. The Graafian follicles develop themselves from the primordial follicles, and are growing towards ma-

turity from the first month of birth to the fortieth year.

2. The larger number of follicles do not mature, do not rupture, do not discharge their contents, but pass over into a condition of atrophy, which is analogous to the formation of the corpora lutea.

3. The development and ripening of the Graafian follicle does not take place periodically in a regular manner, and there is no connection between it and menstruation.

4. Menstruation is a physiological phenomenon, unconnected with the development and ripening of the Graafian follicle.

5. The rupture of the more or less ripe follicle is associated with congestions of the genital organs, which are as yet unexplained matters.

6. Certain diseases, such as fevers, poisoning, etc., cause atrophy of the follicles where there has previously been a parenchymatous inflammation of the ovary.—*Allg. Med. Central Ztg.*, 54, 1874.

APOMORPHIA AS AN EXPECTORANT.—During the last two years the muriate of apomorphia has been used at the Polyclinic in Heidelberg, and is regarded as successful and reliable. Dr. Jurasy, desiring to test its power as an expectorant, gave it in minute doses in cases of tracheitis and bronchitis of the larger and smaller tubes. The results were gratifying. It liberated the firm and tenacious mucus, the sputa became copious, and the cough was much relieved. The auscultatory signs showed also that there was a decided improvement. The formula employed was Apomorphia mur. gr. $\frac{3}{10}$–$\frac{1}{4}$: acid. muriat. gtt. v.; syr. simplicis ℥ ss; aquæ ℥ iv.; a tablespoonful every two hours. It will be seen that the dose averaged between $\frac{1}{80}$ and $\frac{1}{60}$ of a gr. and this amount did not prove too large for adults. The patients stated that after the first dose they had a slightly unpleasant feeling, which did not return after subsequent doses. Apomorphia was found to have the property of becoming greener gradually, but this was overcome by the addition of a little more muriatic acid. It should be kept in black or dark colored bottles.—*Allg. Med. Central Ztg.*, 55, 1874.

TREATMENT OF NON-SUPPURATIVE PERIOSTITIS BY EARLY AND EXTENSIVE INCISIONS.—There are certain forms of periostitis in which Ollier recommends early incisions, not only to prevent the formation of matter and necrosis, but to put an end to the severe pain which the patients suffer.

There is a painful affection which he calls periostitis neuralgica, which occurs without previous warning and without elevation of the temperature, and is characterized by violent lancinating pains, at any point in the diaphysis of a long bone, and especially in the tibia. It occurs most frequently in adults, but is sometimes observed in childhood. Its cause is obscure, though it appears, in most cases, to come from catching cold. While persons are perfectly well, either at their work or during the night, pain is suddenly felt at a certain spot, as, for example, in the tibia, and spreads from there up and down the limbs. It varies in intensity, being most marked at night, but is continuous. Motion of the limb appears at first to moderate the pain, while pressure aggravates it, and yet there are no other symptoms of inflammation. These local manifestations can last many days, in fact weeks, until at length a somewhat doughy swelling is felt etxending to the bone. Active treatment now imperative, though it should be commenced earlier, for the intense pains which have continued notwithstanding the most active anti-phlogistic remedies make the diagnosis certain.

An incision should be made down to the bone, at the point of pain, and then a transverse one, so that no exudation can be imprisoned. The pain immediately subsides, and the wound heals in a few weeks. If these incisions do not give relief in a case showing these symptoms, then we have to do with an osteomyelitis, and the bone must be trephined. Sometimes incision is unnecessary, for an application of unguent. hydrarg. with calomel internally and local depletions may arrest the psoriasis in its early stages. Sometimes Ollier finds great advantage from large blisters covering the entire diseased surface.—*Gaz. des Hôp.*, 114, 1873; *Allg. Med. Central Zgt.*, 60, 1874.

ROKITANSKY.—At the meeting of the New York Pathological Society, held September 8, the following preamble and resolutions were unanimously adopted, and a copy of the same, suitably engrossed, was directed to be sent to Professor Rokitansky:—

It is allotted to very few to have completed a period of nearly fifty years in the successful cultivation of an important branch of medical science. Such an event is worthy of the brilliant commemoration which it has recently received in Vienna, on the occasion of Prof. Rokitansky attaining his seventieth birth-day. Austria may well take pride in the distinction derived from such achievements, in the behalf of medical science and humanity, as have distinguished the career of her illustrious citizen.

The New York Pathological Society, founded in 1844, was organized under the inspiration of Rokitansky's example, and may humbly claim to be of his offspring. It is, therefore, becoming that it should join with the numerous kindred societies of European countries in offering their homage of respect and admiration on such an occasion.

Be it therefore Resolved, That this Society respectfully tenders to Prof. Karl Rokitansky, of Vienna, its most cordial congratulation and best wishes for his continued welfare and happiness, and begs to assure him that its members will always derive fresh encouragement from his inspiring example in the continued unwearying prosecution of his favorite science.

Resolved, That a copy of these proceedings, engrossed and duly authenticated by the signatures of the President and Secretary of the Society, be communicated to Prof. Rokitansky.

Committee. { GURDON BUCK, A. C. POST, JNO. C. PETERS.

THE NEW CORPS OF VACCINATORS.—On the twenty-ninth of September a number of Inspectors were added to the Board of Health of this city, whose duties relate solely to vaccination. Dr. J. B. Taylor, of 76 Orchard St., is the Chief of the Bureau and Inspector of Vaccinations, with a salary of $2,500 per annum. Eleven Assistant Inspectors, having salaries of $1,500, are to visit localities where small-pox exists, and by their labors protect the community, as far as possible, against a spread of the disease.

The following are the eleven gentlemen selected from about one hundred and fifty-six candidates:

Drs. G. W. P. Flynn, R. D. Nesmith, F. Livermore, Peter B. Wyckoff, H. R. Williams, E. A. Post, Martin J. Flemming, E. L. Pardee, Joseph E. Tucker, A. B. De Luna, and Henry Rockwell.

THE COLLEGE INTRODUCTORIES.—The introductory for the College of Physicians and Surgeons was delivered by Prof. W. H. Draper, M.D.; for University Medical College, by Prof. John C. Draper, M.D.; and for Bellevue Hospital Medical College, by Prof. R. Ogden Doremus, M.D.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, October 15, 1874.

A NEW MATERNITY HOSPITAL.

THE proposed establishment of a Maternity Hospital on Blackwell's Island will have a tendency to incite considerable discussion upon many questions which will necessarily come up in connection with it. No one acquainted with the high rate of mortality which hovered around the lying-in wards of Bellevue will doubt that the contemplated change is imperatively called for. Every precaution was taken on the part of the medical staff to prevent puerperal fever, and, as far as we know, every plan was tried that promised any good result, except the complete isolation of puerperal women from the contaminating influences of a general hospital. Now that the time seemingly has come for the trial of the last experiment, let us hope that it will be upon a sufficiently comprehensive scale to leave nothing to be desired in the way of protection against the baneful influences of hospitalism.

Already our fears are aroused by the publication of an intention to remove the Small-pox Hospital, situated on the lower end of the island, to Hart's Island, and to use the vacated building as part of the new one to be constructed. Although the intention is to make this building the administrative department, there is no reason why even its indirect connection with the other buildings should not be detrimental. But aside from this, the new hospital which would be built around this nucleus would be in very close proximity to Charity Hospital, the distance being measured at most by a few hundred yards. It is true there would be some benefit in being somewhat removed from the influences of a large hospital, but is it worth while for the sake of economy to run any risks whatever? to take any of those questionable chances which a dangerous neighborhood may offer? We admit that we may be straining a point in making this assertion, and that our fears in regard to the immediate vicinity may be, to a certain extent, groundless; but certain it is, even with such a construction, that it would be better to isolate the new hospital as much as possible to begin with.

If we were to select any particular place in the vicinity, which would be farthest removed from any large institution, we should select the centre of the island, between the Alms-House and the house of the warden of the Penitentiary. Aside from this locality being eligible in this respect, it has the great advantage of being high ground. The old Small-pox Hospital would be too small for the purposes intended, and this alone should be a powerful argument, in an economical point of view, against its use as a part of the new Maternity.

The pavilion plan would be the one to adopt. We believe that such is the intention of the Commissioners in any event. We have an idea that no hospital should have any other kind of construction, and especially does this apply to an institution devoted to the care of lying-in women. The details of construction can be intelligently discussed only when some general plan is agreed upon, when the conditions to be fulfilled are thoroughly and intelligently appreciated. The main object to be sought is the protection of individual patients. This we believe can be best carried out by the so-called "cottage plan," giving each patient the advantage of complete isolation during the most dangerous period of confinement, at the same time that all the benefits which belong to a well-regulated institution are enjoyed. Each of these apartments, although connected, should be entirely independent, the only means of communication being a common corridor. A large pavilion for convalescents is also a necessity, and this it strikes us could be divided up into suitably sized wards, say four in number, three only of which are occupied at a time. By this means each ward would be thoroughly aired once in three weeks, the great advantage of which can be readily appreciated by any one who has had any experience with hospital epidemics.

We do not, however, propose to go into any extended remarks upon hospital construction, but desire in connection with the new project to allude to another matter of hardly less interest. This Maternity Hospital should have all the requisite facilities for training nurses. There is such a demand in this country for the teaching which such an institution can give, that its appointments as a model of its sort will never be complete unless this demand is met. Experiments in this direction in other countries has met with brilliant successes, and the existence of skilful midwives and intelligent nurses has become one of the necessities of our civilization. We believe that a system of education could be inaugurated in a large and well-managed maternity, which would in large measure supply the great necessity for competent female accoucheurs, for skilful and conscientious midwives, for careful, intelligent and well-trained nurses. We

earnestly hope, when the proposition shapes itself into a certainty, that among other appointments will be such a training school for nurses.

VIVISECTION.

It would seem that the present crusade against vivisection is not only based upon the assumed fact that such experimentation is useless, but that it is carried on to gratify the barbarous propensities of professors of physiology in particular, and all other investigators in general. It is certainly strange that Mr. Bergh, the champion of animal rights, should attempt to argue with the whole profession upon a question, of which, as a layman, he can know nothing. It is too late in the day to affirm that experimental physiology has accomplished nothing; it is absurd to say that it has no discoveries to make in future, and ludicrous to assert that God never intended us to make use of the lower animals for our good; or in other words, that we have no business with discoveries which may be the results of vivisections. It is pretty evident that Mr. Bergh has a very bad case. He has certainly to advance some better arguments in favor of his clients than he has yet done to produce an impression upon the next Legislature. The Medical Society of the County of New York has already taken up the matter, and has unanimously passed strong resolutions in favor of vivisection. The Medical Society of the State has also declared itself unequivocally on this point, and stands ready to repeat its action at the next session, if there be any effort on the part of Mr. Bergh to alter the laws of the State to suit himself. We have always been opposed to one-man power, and it is time that the President of the Society for the Prevention of Cruelty to Animals should be shown the necessity of narrowing his sphere of usefulness to its harmless and legitimate limits. From being simply good and humane in the first place, he has become, in turn, enthusiastic, ambitious, conceited, and aggressive.

DEATH FROM AN ANÆSTHETIC.

Another death from chloroform in a dentist's chair occurred recently in Boston, and again the old question of using this anæsthetic is brought up for discussion. We believe it is definitely settled, by all who know anything of chloroform, that it is an exceedingly dangerous agent, and that it should not be employed unless in exceptional cases. There are certain surgical and obstetrical operations in which its use is incomparably serviceable, and in which a choice should always be in its favor against ether. The end in such cases justifies the means. In dentistry, however, there is no reason why chloroform, in consideration of its danger, should have the preference of ether, and the dentist who administers it not only runs the usual risk of losing his patient, but of being reprimanded by a Coroner's jury. It would be a reflection upon the judgment of dentists in general if a law were enacted forbidding them to use chloroform in their operations, but they have, nevertheless, invited such a course by their persistent and defiant antagonism to a general professional sentiment upon the subject.

THE COLLEGE INTRODUCTORIES.

The introductories before the medical schools of this city were well attended, and what is better, were well delivered. We are glad to see a disposition in the speakers to descend to the practical, and to cease prating of our honorable profession, the great dignity of medicine, and other like sentimentalism. While all this is mawkish to outsiders, it does no possible good to the student. In the present addresses special subjects were taken up and discussed in a practical and truly creditable manner. We have no doubt that the audiences were all satisfied that medicine was a useful science, by the practical demonstrations that they witnessed. If not, they ought to have been. Certain it is that the lecturers did their duty.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, September 9, 1874.

Dr. Gurdon Buck, Chairman.

NECROSIS OF LOWER JAW.

Dr. A. C. Post presented some specimens of dead bone, which he had removed by operation from the lower jaw of a child between one and two years of age. The peculiarity of the case was, that the sinus leading to the dead bone was below the base of the jaw, that there was no communication with the cavity of the mouth, neither was it necessary to make any in the operation.

He also exhibited a vesical calculus weighing two hundred and forty-two grains, which he had removed by the bilateral operation, on the 25th of June last, from a middle-aged man, a patient of the Presbyterian Hospital. In connection with the specimen, he exhibited an instrument known as Sims' rectum dilator, which he had found in this operation, and in others of a similar nature, to be of great service in dilating the opening without running the usual risks of tearing the parts.

He exhibited, lastly, a lipoma removed from the shoulder of a middle-aged woman, and which had existed in that locality for eighteen years. During all this time it had undergone no apparent change in structure. By the use of very fine waxed-silk sutures, union by first intention occurred throughout the entire extent of the wound.

EMBOLIC ABSCESSES—RESECTION OF RIBS AND PORTION OF SPINE—MENINGITIS.

Dr. A. Jacobi presented a portion of the thorax taken from a young man who was admitted to the Mount Sinai Hospital about a year ago. When admitted the diagnosis of the case was intermittent fever, which fever was accompanied with very severe head-

ache. His fever had lasted unusually long, and the headache was still quite severe when Dr. Jacobi first saw him (Oct. 1). His spleen was markedly swollen, and his treatment by quinine was continued. His headache did not disappear entirely.

He was then examined a little more closely, when it was found that he suffered from incompetency of the mitral valve, in consequence of which there was an hypertrophy and dilatation, especially of the right side of the heart. This condition explained the reason why the spleen did not diminish, as it should do, and why the headache, likewise the result of venous congestion, lasted so long.

The patient was then treated symptomatically and improved; but he was never well enough to leave the hospital. Now and then he would have a little fever, again, some pain about his joints, and again, he would complain of palpitation and other heart symptoms.

In this condition he remained in the hospital some time, when, one day, after he had more fever for a week, the attention of Dr. Jacobi was directed to a swelling in the sacral region; at the same time there was another swelling on the left side of the chest, corresponding to the centre of the tenth rib. Fluctuation was discovered in these swellings, and an examination of the heart showed that the murmur had altered in character. During this examination a slight swelling was also discovered in the intercostal space of the fourth and fifth ribs. This latter swelling was very small, and did not give any fluctuation. The diagnosis of embolic abscesses was then made, and a few days were allowed to elapse before these abscesses were opened. The first one opened was in the lower portion of the spine, and a week afterwards the abscess over the tenth rib was evacuated. About this time the abscess between the fourth and fifth ribs had disappeared, and the conclusion was that it had burrowed somewhere inside. As no severe pleuritis had occurred it was thought that the abscess could not have found its way into the chest cavity, and hence the conclusion was that it had insinuated itself somewhere between the thoracic wall and pleura. For a long time, however, there did not seem to be any justification for cutting down upon the original site of the swelling, and without any distinct guide. Meanwhile the two other abscesses were treated locally by injections. After the incisions were made the fever became less, and the general condition of the patient was better.

In the course of the next two weeks a moderate amount of pleurisy set in on the left side. It was not very amenable to treatment. He had fever that lasted for weeks, and it was found that the pleura became thickened and the respiratory murmur gradually diminished. One day, when the abscesses were being injected, a slight swelling between the fourth and fifth ribs again showed itself. This afforded the hint for an incision at that place, which was accordingly made a few days afterwards. Although no probe could be passed between these two abscesses, to show any communication, yet by injecting one or the other the fact was palpable.

Treatment was thus continued for several months, and the general condition of the patient appeared tolerably well. His pleurisy had ceased increasing, and there was very little fever for a number of weeks. Then fever set in again. Examining the middle abscess it was found that a small portion of the tenth rib was bare, also that dead bone could be reached through the lower opening. This was during June of 1874. About this time the middle opening (over the tenth rib) closed gradually, and it was feared, that as the man lay constantly on his back, the pus would find its way between the pleura and thoracic wall to the posterior part of the chest. Consequently, the wound was dilated and a portion of the tenth rib exsected. A large amount of offensive pus thus found an outlet. Injections were used thrice daily for a few days, when the discharge improved in character. On introducing a probe into the wound at the time, it was possible to pass it in an oblique direction upwards as far as the fourth rib. A drainage tube was introduced into this tract, and through the tube carbolic acid solution was injected two or three times a day, and later iodine in solution. As a result of this treatment the discharge ceased very rapidly, although not entirely, and the general stamina of the patient was improved. In such a condition the patient remained for a long time, until new fevers set in, and until it grew probable, in fact almost certain, that all the pus could not be discharged, that it had, in fact, found some recess beyond the reach of the injections.

After continued external and internal treatment the wounds were again carefully examined. It was then discovered that, in addition to what has been stated, the bones of the sacrum were in a carious condition. The upper wound being still contracted, a portion of the fifth rib was exsected. with the good result of increasing the discharge of pus, which at this time was not so offensive as formerly. While the patient was under ether the lower opening was examined, when it was thought absolutely necessary, after consultation, to remove the posterior portions of the lower lumbar vertebræ, including two spinous and a part of the corresponding transverse processes. Just before the completion of this operation, by some accident the meninges were cut into or otherwise injured, and about an ounce of cerebro-spinal fluid escaped. It was hoped, notwithstanding this accident, and in spite of his low condition, that no meningitis would result. His fever went down immediately after the operation, the temperature from 106 became 100, and remained at that point for three days. After that time the patient became feverish again. The fever could not be explained in the beginning, as there were no peripheric symptoms which pointed to meningitis. His feverishness continued, however, for some days, at the end of which time he became drowsy, with slight convulsive movements, and finally died six days subsequent to the last attempt made to relieve him.

The post-mortem examination, as far as the brain and spinal cord were concerned, revealed the lesions of very intense meningitis. The autopsy was made during Dr. Jacobi's absence from town, but it was reported to him that there was a good deal of injection of the dura mater of the brain. Some of this condition was still visible at the presentation of the specimen to the Society. Besides this, there was a good deal of thickening of the dura mater and pia mater, as well as deposits of a fibro-purulent character, on the surface of the brain. The falx cerebri was very much roughened and thickened. There was nothing abnormal in the substance of the brain itself. The meninges at the point of injury showed no signs of inflammation.

Dr. J. next exhibited the chest walls, and pointed out the seats of the different operations performed during the life of the patient. In the neighborhood of the middle wound was a fistulous tract leading therefrom to the abscess which was opened during life. The two pleuræ were very much thickened, the lung compressed and pushed upwards and posteriorly, and an abscess was found about four inches to the left from the upper incision and resection, in close juxtaposition to the compressed lung. It contained about two ounces of pus. The pericardium was firmly ad-

hering to the pleura. The heart was found enlarged, especially on the right side, caused by vegetations upon the mitral valve. Some of these vegetations became separated, coincident with the change in the character of the murmur, and escaped in the circulation, cutting off the supply of blood in those parts of the body which eventually became the seats of the abscesses.

Although the chances for life in the patient were very poor, Dr. Jacobi had no hesitation in expressing the opinion that death was hastened by the accident to the meninges. The escape of the cerebro-spinal fluid caused a corresponding vacuum in the cranial cavity, which invited a congestion, and that, in its turn, a high grade of inflammation. In this connection he alluded to a case of spina bifida, in an operation for which some cerebro-spinal fluid had oozed out, and in which, death occurring, the same brain lesions were discovered.

Dr. Mary Putnam Jacobi remarked that the congestions of the lung in croup were to be explained in the same manner, on account of the insufficiency of air.

Dr. Finnell exhibited a specimen of necrosis of the head of the femur, which he had exsected in a boy, aged 14, who had the disease ten years. There were numerous sinuses in the vicinity of the joint, and the extremity was in the characteristic position of the disease in the third stage. The head of the bone, and the greater part of its neck, were almost entirely destroyed, as well as the surface of the acetabulum. The section was made just below the trochanters. The patient recovered with a shortening of two inches, although the extremity, from being held so long in one position, lost much of its usefulness.

Dr. Post remarked that the latter condition of things appealed to the necessity of performing the operation as soon as all other means were found unavailable.

ACUTE ATROPHY OF LIVER.

Dr. J. Messenger presented a specimen of acute atrophy of the liver, taken from a man aged forty-three. The patient was as good a specimen of perfect health as he ever saw, until, by continuous and protracted drinking of large quantities of brandy, he had finally produced serious trouble with his liver. The first thing that attracted notice was the distention of his abdomen, and a slight jaundice, which however deepened into an almost bronzed appearance of the whole body. Increased temperature was made with the aid of an axillary thermometer, but at no time was the heat above 102°. The pulse was weak and frequent. Insatiable thirst was a prominent feature in the case. Highly colored and scanty urine, with very large quantities of deep yellow-colored urates. The urine had a specific gravity of 1030, smelled badly, and stained whatever white fabric it came in contact with a deep yellow color. The skin was dry and harsh, and rough to the touch. A peculiar heat was also felt when the hand of a healthy individual was brought in contact with it. The tongue was very dry and rough, like that of a patient suffering from typhoid fever of a severe type. The dejections from the bowels were of light clay-color, floated lightly upon water, and were almost odorless for a while. Physical examination showed that the liver extended about four inches below its normal level; was very tender and smooth. Abdominal distention was very marked. Palpation and succussion indicated a collection of fluid.

Acute disease of the liver was diagnosed by Prof. A. Clark, Drs. J. J. Crane, Vosburg, and E. H. M. Sell. After using all the means, which are too numerous to mention here, tapping was resorted to eight successive times, and about twenty gallons of liquid, very albuminous yellow, were drawn off. From twenty-one quarts down to three at each séance were drawn off at different times. Vegetable diuretics seemed to have more effect in relieving him than any or all others. Under the influence of them *all* of the aforementioned symptoms were greatly mitigated. The urine became more copious, the jaundice disappeared, the dejections from the bowels became, to appearance, quite healthy-looking, the appetite and digestion became natural also. Notwithstanding all this, the patient became more and more enfeebled, and after a severe sickness of about eight or nine months, death came to his relief.

But a limited examination (*post mortem*) was allowed us. The peritoneal investments of the parietal wall and viscera of the abdomen were nearly all adherent, and in some places could not be separated. They were torn through to get at the liver, which was found very much diseased, nothing having undergone any very great amount of diminution from the size, as is generally laid down in the books. A fibrous tissue had taken the place of the ordinary hepatic lobules and cells. But a small portion of the healthy structure of the liver remained.

OVARIOTOMY.

Dr. Sell presented a specimen of fluid from an ovarian cyst, which he tapped, September 3d, and made, in substance, the following remarks:—The subject of the specimen I present is Mrs. M., aged 55 years 9 months, widow for 14 months, having been married 31 years 4 months, and is the mother of five children. The eldest died at 10 years, would now be 31 years; the youngest, now living, is 14 years. She also had three or four miscarriages.

Her general appearance has that peculiar pinched expression described as the *facies uterina*, or *facies ovariana*. Her complexion is rather sallow. Emaciation progressed for the last four months. Habits of life temperate; surface of body natural, slightly moist. Temperature of skin and extremities normal: in axilla, 98.2°; in vagina, 99.2°; pulse, 120, falling to 90; and respirations 18. Considerable œdema over lower part of abdomen.

A large tumor, oval in shape, inclined very slightly toward the right side. Measurements: 1, Girth at umbilical level, 42¼″; 2, from ensiform cartilage to umbilicus, 11½″; 3, from umbilicus to symphysis pubis, 12¼″; 4, from right ant. sup. sp. of ilium to umbilicus, 13¼″; 5, from left ditto to umbilicus, 13¼″. But slight mobility of the tumor, whose parietes, especially below, are very thick. Lineæ albicantes, as well as dilated veins on the abdomen, but few. Fluctuation almost entirely confined to the region above the umbilicus. But little crepitus, and scarcely any tenderness, save a little on pressure on the right side, four inches from the spine of the ilium, but no soreness.

Percussion elicits dull sounds, and auscultation reveals a faint bruit all over the abdomen. The uterus, situated rather high and a little to the left, measuring about three inches, is movable, but stationary on moving the tumor.

The os and cervix uteri are slightly dilated, otherwise normal to the touch. Vagina, rectum, and anus are normal. The patient commenced to menstruate at 17 years, and ceased at 50 years. Has no dysuria, incontinence, nor irritable bladder. Urine normal, except less in quantity.

Tongue is clean; appetite not very good; some

thirst and flatulence; bowels regular. Sleeps not long at a time. Mental condition good; no hysteria nor neuralgia; no cough nor expectoration. Rests best on her left side. Pulse pretty strong, 120 per minute, falling shortly to 90, showing the influence of an involuntary fear. Heart sounds normal.

First signs of ill-health commenced about 2½ years ago, having a pain in her left groin, on coitus. There was no vaginal fulness, no bearing down of uterus, no pressure on the bladder, no pain, numbness or weakness of the legs, nor any nausea.

Dr. B. F. Vosburg, her usual medical attendant, discovered, about 2½ years ago, a non-fluctuating tumor, size of a large fist, in the left iliac region.

Dr. V. saw the patient but seldom, as her condition did not require medical treatment. The rate of the tumor's enlargement was gradual and slow, no changes in its situation, and no movements felt. There was no dyspnœa, no tympanites, no febrile attacks, nor cyst inflammation.

In the winter of 1873 and '74 she had four or five attacks of local peritonitis, for which she was treated with opium and cinchona, and since these attacks the tumor enlarged at least to double its former size.

There never were any signs of ascites, nor any discharges pointing to a spontaneous rupture of the cyst, neither through the uterus, vagina, bladder, bowel, nor abdominal wall.

The patient losing ground, her appetite failing, her sleep being much interfered with from pain, chiefly in her back and down her thighs, and emaciation progressing constantly for the last four months, Dr. V. saw that unless something was done for her speedily her health must fail rapidly. Hence the doctor called me in consultation on the above date, when, after as thorough an examination as was possible under the circumstances, without an anæsthetic, we concluded that tapping should be performed, both to relieve the patient as well as to clear up the diagnosis. While we were certain of having to deal with an ovarian cyst, it was not quite so clear with what particular kind, save that its larger portion was solid.

Tuesday, September 3d, was accordingly appointed as the day for the operation. At 10 A.M., assisted by Drs. Vosburg and Messenger, I made another thorough examination, and a spot about two inches below the umbilicus, and a little to the right of the linea alba, where some fluctuation was manifest, was thought available; and here, after dividing the skin, I tapped, using the valuable trocar of Mr. Chas. Thompson, of Westerham, employed by Mr. Spencer Wells.

At first nothing came, but after waiting a little we were pleased to see a viscid fluid like thick jelly, of a grayish tint, pass with difficulty through the canula, which is three lines in diameter. It required six hours for sixteen pounds of this fluid to flow through; the last half pound, being very thick, was removed by attaching an aspirator to the tubing, by which means all the air was exhausted. The wound I closed by passing a hare-lip pin deeply across the opening, and twisting several turns of silk around it.

The *microscopical examination* of this fluid revealed the contents, which are ordinary in a *multilocular colloid cyst*. A teaspoonful of the following mixture was ordered at bedtime: ℞. Ex. cypripedii fl., ex. asclepiæ fl., ex. dracontii fl., ex. scutellariæ fl., āā. With this the patient sleeps very well, and can now rest on both sides.

On the 5th of September, second day after the operation, she was up and about, as usual, but feels a great deal better than she did for some time before the tapping.

Another examination, made September 19th, assisted by Dr. R. Newman, corroborates my former diagnosis, viz., that the tumor is a multilocular colloid ovarian cyst, with much solid matter.

The dimensions were found but a fraction smaller than before tapping, sixteen days ago; however there is much less tension, and the patient continues to feel much better, enjoys better appetite, and sleeps well. The conclusions arrived at are as follows: that when necessity demands, ovariotomy should be attempted in preference to tapping, as the latter affords too little relief in comparison to the amount of danger incurred from peritonitis and inflammation of the cyst.

The unfavorable points for ovariotomy in this case are the following:—

1. The necessary long incision required.
2. The known adhesions.

On the other hand we have—

1. Likely freedom from adhesions to the pelvic viscera, demonstrated by the knee-elbow position, as recommended by Mr. Spencer Wells in his valuable book.
2. The relative good health of the patient.
3. Her endurance of disease, as revealed during the several attacks of local peritonitis.
4. No bad symptoms following tapping.

On March 28th, 1874, Dr. Messemer requested me to tap an ovarian cyst in a young married lady, about 22 years old, in whom I had diagnosed an ovarian cyst five weeks previous. Tapping was recommended in this case in preference to ovariotomy, as the lady was apparently fast declining from a pulmonary and throat affection. She suffered greatly from dyspnœa, and had a high fever. We obtained fourteen pints of a greenish viscid fluid, containing, besides several of the contents usually found in a unilocular ovarian cyst, a large amount of pus. Strange to say, this patient improved rapidly, and has not only recovered from her sickness, but we are informed that she is not enlarging.

Reports of Hospitals.

PENNSYLVANIA HOSPITAL, PHILADELPHIA.

NOTES OF PRACTICE AND PECULIARITIES IN TREATMENT.

MEDICAL DIVISION.—DR. BRADFORD, HOUSE-PHYSICIAN.

THE following medical items were obtained from Dr. Hutchinson, visiting physician, while passing through his wards.

THE TREATMENT OF PNEUMONIA.

The chief remedies employed in the treatment of this affection, in this hospital, are quinine, nitrate of potash and Dover's powders.

The quinine is given in small doses and frequently repeated, being administered for its tonic effect. It has been used but very little in this hospital for its *antipyretic* effect, either in pneumonia or typhoid fever. In Bellevue Hospital, New York, the remedy has been very much used for this purpose, hoping thereby to prevent tissue waste. The nitrate of potash is regarded as mildly antiphlogistic, as possessing in some degree a solvent power over the exudation, and it has also some diaphoretic influence.

The Dover's powder is administered in soothing doses.

Poultices are applied to the chest and ordinarily covered with oil silk; they are believed to act as revulsives. Stimulants are used according to the condition of the pulse. Diet is sustaining, general blood-letting is very rarely resorted to.

SUBACUTE PLEURISY OR PLEURISY WITH EFFUSION.

Diuretics are mainly employed, but particularly ferruginous diuretics. The liq. ferri per acetatis, or Basham's mixture, is uniformly administered. Diet sustaining. The formula for Basham's mixture as furnished by the apothecary of the hospital is as follows:

℞.

Liq. ammon acet	℥ vi.
Acid acetic	ʒ iii.
Tr. ferri chloridi	ʒ v.
Alcohol	℥ ii.
Syrupus	℥ iv.
Aquæ	℥ iv.

M.

Teaspoonful doses three or four times a day or oftener.

Paracentesis is never resorted to early, unless there are present some special symptoms which demand it.

ACUTE PHTHISIS.

The patient presented the ordinary symptoms of acute-consumption; high temperature; consolidation at right apex, etc., etc. Good diet and the use of Niemeyer's pill were the chief elements of treatment.

Dr. Hutchinson remarked that he did not regard cod-liver oil as being of much benefit under such circumstances.

NIGHT SWEATS OF PHTHISIS.

Atropia and oxide of zinc are the two remedies chiefly employed for the relief of this particular symptom. Consumptive patients in general are placed upon Niemeyer's pill. The formula for the pill, which properly speaking is Heim's pill, with Niemeyer's addition, is as follows:

℞. Pulv. herb digitalis ʒss; pulv. rad. ipecac, pulv. opii puri, aa grs. v.; ext. hellenii q. s. u: f. pil. No. xx. consp. pulv. rac. iric. flor. S. a pill, t. i. d.

A scruple of quinine may be added to the above for its antipyretic effect, according to Niemeyer.

CHRONIC BRIGHT'S DISEASE.

Diet nourishing; and the administration of tr. ferri chlorid, or Basham's mixture, are the leading features of the treatment of this affection, unless special symptoms are developed. Some cases of late have done remarkably well upon the White Rock spring mineral water. Hydragogues are commonly employed where dropsy supervenes. When convulsions are present or threatening, a purge is administered, generally elaterium, and perhaps a hot-air bath. Opium has never been employed in this hospital in the treatment of uræmic convulsions.

GENERAL BRONCHITIS, WITH PROBABLE PHLEBITIS AFFECTING LEFT SAPHENA.

The patient when admitted was very much exhausted; system in a low condition, etc., etc.

The free use of stimulants and nourishment were necessary to sustain life. A few days after admission he suddenly developed symptoms indicating the presence of phlebitis affecting the left saphena. The treatment adopted for this complication was to place the limb in a straight position, with the foot elevated as much as could be conveniently done. In that position, the limb was kept continually wet with warm water and tincture of opium. This continuous fomentation had relieved all the acute symptoms, and, so far as the leg was concerned, the patient was in a comfortable condition. It was feared that the general bronchitis might terminate in some disease of the chest of a more serious nature. He was placed upon Niemeyer's pill; the brown mixture or compound liquorice mixture and sulphuric acid with infusion of wild cherry bark. Diet sustaining.

ACUTE ARTICULAR RHEUMATISM.

Cardiac complications are commonly present when the patients are admitted. A soft blowing murmur heard at the base of the heart with the first sound is regarded as a cardiac complication, but one which will probably pass away as the rheumatic fever subsides and disappears. These patients are treated mainly by the use of bromide of ammonium, administered in doses from 16 to 20 grs. every 2 or 3 hours. Citrate of potassa is also not unfrequently administered in doses of 20 grains every three hours until the fever subsides. When the fever has subsided, quinine is administered in full doses. There is no aim in the treatment of rheumatism in this hospital to render the urine alkaline. When alkalies are pushed convalescence is rendered much more tedious.

The joints are wrapped in dry cotton. When pericarditis or endocarditis occurs, if there is excessive cardiac action of a tumultuous character, infusion of digitalis is usually administered; and if there is much effusion into the pericardium, a blister is placed over the præcordial space.

CHRONIC RHEUMATISM.

The question was asked what to do for these cases —who has had any uniform success from any particular plan of treatment?

TYPHOID FEVER.

Treatment, in the main, expectant. A fair amount of nourishment, and of such articles as can be easily digested, and then treat the symptoms as they are developed. If diarrhœa needs control, lead and opium; opium suppositories, perhaps tannic acid and opium suppositories, are the principal agents relied upon. If hemorrhage from the bowels occurs, about the same line of drugs is employed. In the last condition an extra amount of stimulants and nourishment may be required. The acid treatment of typhoid fever is thought well of, and very frequently muriatic acid dilute is administered from the beginning.

DIABETIS MELLITUS.

The patient has been placed upon opium three grains daily, and increased to seven or eight grains, without producing any special effect upon the disease. He was now receiving bicarbonate of potassa with the opium, and was improving markedly under this treatment. The diet was regulated to conform to the disease.

DIABETIS INSIPIDUS.

The patient was taking tr. ferri chlorid. and was rapidly improving.

MEHOD OF APPLYING THE NITRIC ACID TEST FOR ALBUMEN.

The presence of albumen in the urine in exceedingly small quantities can be detected by making use of nitric acid in the following manner: fill a test tube a third or quarter full of urine, and when the nitric acid is added let it run down the side of the test tube drop by drop. Added in this manner, the acid will collect

upon the surface of the urine, and if albumen is present it will be recognized by the presence of a white line between the acid and urine, which will be delicate in proportion to the amount of albumen in the urine. Albumen in urine is much more certain of recognition when the acid is added in this manner, than when added in what may be called the ordinary manner.

FACIAL ERYSIPELAS.

Tr. ferri chlorid. gtt. xx. every two hours from the beginning. The common topical application is mucilage of slippery elm; keeping the parts constantly wet with it.

In the later stages of the disease oxide of zinc ointment is applied. Phlegmonous inflammation had occurred in the eyelid of one patient and abcess had formed. The abscess was evacuated, and oxide of zine dressing employed.

Erysipelas had been in the hospital to considerable extent, and one very interesting feature was developed in some of the cases in Dr. Da Costa's wards, namely, the occurrence of *endocarditis* as a complication.

Some deaths had occurred from erysipelas in which there were developed marked head symptoms, but no lesions were found in the brain or its membranes, either gross or microscopical.

The endocardial cases showed the necessity of close and prompt search for internal complications which may attend such general morbid conditions.

GENERAL DROPSY—CARDIAC.

Infusion of digitalis and broom tea were the remedies employed.

About a pint of broom tea was taken in twenty-four hours. The ordinary dose of the infusion of digitalis administered was a dessertspoonful, and occasionally bitartrate of potassa was combined with it.

ASCITES.

Paracentesis abdominis is resorted to only when all other means have failed, and when distressing symptoms are developed which render it necessary.

CHRONIC DIARRHŒA.

The case was regarded as being one of diarrhœa and not dysentery. Particles of food were seen in the dejections when examined microscopically.

Treatment consisted in regulation of diet; the administration of pepsine and muriatic acid; and the use of tannic acid and opium suppositories. Patient was improving.

WRIST DROP.

The case was one of lead poisoning, and had received iodide of potassium before admission.

Treatment now consisted of hypodermic injections of strychnia $\frac{1}{32}$ of a grain over the muscles daily, and the use of the *constant* current.

SURGICAL DIVISION.

Dr. A. Hewson, Visiting Surgeon.

By the favor of Dr. Hewson we were permitted to see something of the "earth dressing," which he recommends. The earth used is common clayey soil dried and sifted. Care must be taken in drying the clay that it is simply dried and not roasted. It should be free from all vegetable matter, sand, etc.

When applied it is wet up with *cold* water, and made of such consistence that it can be easily spread upon cloth.

In general, the wet clay is spread upon strips of cloth of the same width and length as strips of adhesive plaster cut for a like purpose, and then applied in the same manner. The following is a brief reference to cases in which the dressing was seen applied. "The earths containing the double salts of alumina with lime or magnesia, rather than those with soda or potassa," says Dr. Hewson, "were early found the better preparations for surgical uses." Fuller's earth has been used, but it has been found to be rather too alkaline.

COLLES' FRACTURE.

The fracture was treated upon a Bond's splint. At first there was very much swelling. The clay dressing was applied for the purpose of subduing the swelling and inflammatory action in general. The patient said that immediate relief was afforded.

CHRONIC ULCERS.

The clay dressing is used in chronic ulcers, applying the strips in the same manner as adhesive plaster and covering the whole with a bandage. The patients are permitted to go about. Satisfactory results are obtained.

FACIAL ERYSIPELAS.

Constitutional treatment by the use of quinine and iron. For topical application, earth dressing. In one case, phlegmonous inflammation with formation of abscess in both eyelids had occurred. The sores looked healthy and evidently were healing rapidly.

CARIES OF STERNUM.

Earth dressing kept the parts in a cleanly, wholesome condition.

CHRONIC GONORRHŒA.

The case was one that had resisted every form of treatment that had been adopted, which had been numerous. Injections of earth, rendered sufficiently liquid with water that it can be thrown through a syringe, were employed, and the patient was nearly well. The remedy had been used only a short time. Acute gonorrhœa is treated in the same manner.

COMPOUND FRACTURE OF THE SKULL.

The wound was dressed with the earth dressing, and was doing well.

PENETRATING WOUNDS OF THE ABDOMEN.

The doctor mentioned that he had had in his ward within the last three months *five* cases of penetrating wounds of the abdomen inflicted with knives. In every case there was protrusion of either omentum or intestine. The omentum or intestine was immediately reduced; the edges of the wound brought together with the wire suture, and the clay dressing applied. Every one of these patients was discharged, having recovered within a week from the reception of the wound. Not a single bad symptom was developed; nor was opium used. Pyæmia was in the hospital at the same time.

SPRAINS.

Wrap them up with the earth dressing, and recovery takes place within a week.

PARENYCHIA.

This patient's hand was enormously swollen when admitted, and was exceedingly painful. A cast of the hand was made. The earth dressing was applied, and the pain was at once relieved, and the patient said that it had not pained him since. The swelling immediately began to subside, and at the end of three days the size of the hand was reduced two-thirds as determined by a second cast. The results obtained by

treatment in this case were exceedingly gratifying to the patient.

BED SORE.

The case was one of paraplilegia. A large bed sore had been developed over the sacrum, and one upon each heel. These were treated with dry earth by dressing the surface until it is completely covered. The usual offensiveness of this class of sores was almost completely destroyed.

The patient was upon a water bed, but was lying in a bed of earth spread upon paper beneath him; nevertheless it was a most cleanly surgical dressing.

CHANCROID.

This class of cases has the earth dressing, and the result is recovery within a short time.

DEEP STAB-WOUND IN THE THICK OF THE THIGH.

The edges of the wound were brought together carefully, and the entire surface of the thigh covered with wet earth. The patient had not suffered pain since the application, and the amount of soreness was very trifling.

In cases of *burns* the earth dressing is immediately applied.

A NEW METHOD OF MEASURING THE LOWER EXTREMITIES.

Fractures in this hospital are quite commonly treated with the permanent dressing, plaster-of-Paris usually being employed. In some of the lighter fractures, such as of the arm or leg, silicate of soda is used. In thigh splints of plaster-of-Paris, in adults, accessory splints, such as the metallic strips or pieces of binder's-board, are not unfrequently added.

FRACTURES OF THIGH.

Another method of measurement. Place the feet equally distant from the long axis of the body, and then measure from the *umbilicus* to the internal malleoli.

One case was noticed in which fracture of the thigh had occurred, producing very great deformity, and was followed by a great amount of swelling, etc. The limb was placed in a long fracture box, and extension applied by means of weight and pulley at the foot of the bed. The purpose was to wait until inflammatory action had entirely or nearly subsided, and then place the limb in a permanent dressing of plaster-of-Paris.

This is the ordinary method of managing fractures accompanied with considerable swelling, etc. In some fractures which required only a light dressing Dr. Hewson has employed

THE EARTH SPLINT,

made by applying successive layers or strips of cloth upon which had been spread the wet clay. The clay sets within a short time, and makes a tolerably firm dressing.

SULPHITE OF CALCIUM.

A very common prescription made when there is fear of pyæmia, or when the patient has a coated tongue and fetid breath, is the *sulphite* of calcium. It is given in doses varying from 2 to 5 grs. every three hours. Its effect was highly commended.

In other surgical wards the following cases were noticed:—

HYDROCELE.

Two cases of this affection were present which presented some features of interest. In the first, the silver wire had been passed through the scrotum after the fluid had been withdrawn, but it had failed to bring about a cure. It was left in for forty-eight hours, and was followed by a great amount of inflammation. The case was then being treated by painting the scrotum with tincture of iodine. The visiting surgeon had been very successful in treating these cases in that manner.

The second case was one in which the wire had been introduced, and had been followed by an *immense* amount of inflammation. The suture was retained only twenty-four hours. Laudanum and water were being applied to the tumor, which was as large as the largest-sized orange. The remark was ma e that the silk suture was more liable to be followed by extensive inflammation, and perhaps suppuration, than the silver suture.

HÆMATOCLE IN THE THIGH.

The tumor was in the thick of the thigh, and was as large as a child's head. It was the result of a bruise. Unless some very urgent cause is present, do not open an ordinary external hæmatocele.

Rest and pressure by means of a roller bandage were the chief elements of treatment, and the tumor was rapidly diminishing in size.

DELAYED UNION OF FRACTURE.

Five weeks had elapsed since the fracture occurred. There was unquestionably motion at the seat of fracture at that late date.

Remove the dressing once or twice a week and subject the limb to friction, and the extremities of the bones to pretty strong pressure, perhaps permit the patient to go around and occasionally bear some weight upon the limb. In this manner union is stimulated. These manipulations, however, it was remarked, should be proceeded with cautiously, lest injury be done by accident. The phosphites and preparations of that kind are used if there is reason to believe that the delayed union is dependent upon constitutional trouble.

FRACTURE OF PATELLA.

A number of cases of fracture of patella had been treated by position alone. Place the patient in a position best favoring the approximation of the fragments, and maintain that position until such union as is ordinarily obtained takes place. The results in these cases were exceedingly good. The patients were retained on the single inclined plane for eight weeks.

COMPOUND FRACTURE OF THE LEG.

Treated in a fracture-box. Permanent dressing were not employed, for the reason that the fracture was compound. In these wards the silicate of soda is quite commonly used when permanent dressing is applied.

FRACTURE OF TIBIA.

The case was one in which there was very great projection of the upper fragment inwards. The patient was placed upon his side, and that position maintained for several days, when the deformity was markedly overcome. By means of position and the silicate of soda dressing, union was so perfectly obtained that the position of the fracture could scarcely be determined.

MEDICAL DIVISION.

EPILEPSY.

Petit Mal, with Irritability of the Nervous System.—The case was a girl æt. 11 years. General convulsions were exceptional. She had what the mother called weak spells, during the occurrence of which she remains unconscious; and there is jerking of the muscles of the face, and sometimes of the arms and lower extremities. Has had as many as eleven a day, and continuing three or four days in succession. They had never been known to occur in the night. Has had actual convulsions only twice. Has been in this condition for three years. These symptoms began to appear about one year subsequent to an attack of small-pox. Close examination led to the conclusion that the case was one of idiopathic epilepsy, unless it was dependent upon the effects produced by the small-pox. That was thought to be quite possible, for at the time the child was suffering from small-pox there was considerable mental disturbance, and it was believed to be quite possible that some central complication was developed which left traces of meningeal thickening and slight irritation of nerve structure that had given rise to these attacks. Aura quite well marked. The child was quite irritable at all times.

Treatment.—The possible cause was borne in mind, and iodide of potassium was ordered, in three-grain doses, three times a day, two hours after each meal. For a more specific action upon the epileptiform seizures, bromide of magnesium was ordered, in ten-grain doses, three times a day, administered in simple syrup and water. Bromide of magnesium is well taken by children, and is sometimes better borne than the potassa salt, although its action is very similar.

Correspondence.

HYDROCHLORAL BY THE RECTUM IN VOMITING OF PREGNANCY.

To the Editor of The Medical Record.

Dear Sir:—In The Record for June 1, 1874, there is a communication from Dr. D. B. Simmons, attesting the efficacy of "Hydrochloral by the Rectum in Vomiting of Pregnancy." Perhaps the following history of a case treated successfully by the method proposed by Dr. S. will be interesting in connection with that article:—

On July 8, 1874, was called to see Mrs. M., age 28, extremely anæmic, pregnant with third child; found her suffering with symptoms of renal colic; pain on right side of abdomen extending down right leg, inner side; numbness covering the distribution of right anterior crural nerve, great frequency of micturition, small amount of urine passed, with heavy deposit of urates, nausea and excessive vomiting. These symptoms had continued more or less severe for seven days. Prescribed morphia with anti-emetics, which somewhat mitigated the pain, nausea and vomiting continuing.

On the 11th pain suddenly stopped, numbness passed away, nausea and vomiting as bad as before.

12th. Showed me a small calculus (uric acid) which had given rise to severe pain while passing through the urethra; does not urinate so frequently, no pain, deposit of urates not so heavy, nausea and vomiting as usual.

My attention being now directed mainly to the "sickness of stomach," I interrogated all the organs, organic or functional disease of which would give rise to these symptoms, with a negative result, and concluded that they were of sympathetic origin due to pregnancy, which had advanced to the eighth week.

The nausea had been continuous now for eleven or twelve days, and the stomach was unable to bear anything, no matter how small the quantity; even half a teaspoonful of milk or water would come up immediately; during this time she had taken *no* nutriment whatever, being opposed to feeding by the rectum.

Between the 12th and 22d I had recourse to hydrocyanic acid, dil. chloroform, oxalate of cerium, bismuth, alkalies, nux vom., potass. bromid., creosote, wood naphtha, carbonic acid, hyposulphite of soda, and calomel, neither of which produced any good effect whatever. I then tried the hypodermic injection of morphia and the rectal injection of tinct. opii, which only aggravated the trouble and apparently produced a diarrhœa each time they were used.

On the 22d she was so weak as to be unable to rise from her bed. By representing the extreme gravity of the case to her I got her over her antipathy to enemata, and commenced the frequent injections of brandy, eggs, milk and beef-tea with starch. Deeming that I had sufficiently tried anti emetics and anodynes (in fact I was at a loss to know what else to use), I was about demanding consultation with the view of inducing abortion, if needs be, when the article of Dr. S. was recalled to my mind.

July 23d. Administered grs. xl. hydr. chloral per rectum night and morning. July 24. Nausea and vomiting relieved, half a cup of weak tea remained on stomach; feeling so well to-day she omitted the injections, and as a result the nausea and vomiting is this afternoon as bad as ever; no sleep since chloral was given. July 25. Ordered grs. xl. chloral with potass. bromid. ʒ i. per rectum three times a day. July 26. Injections retained; sleeps well, no vomiting, no nausea. July 27. Condition the same. July 28. Injections omitted. July 29. Nausea and vomiting have come on again, though not very severe; again ordered chloral and potash. July 30. Neither nausea nor vomiting; retains food well.

Continued the injections until the 1st August, when they were stopped; has remained well ever since, anorexia disappearing, and rapidly gaining in strength.

Respectfully yours,

W. H. Morse, M.D.

231 E. 77th Street.

THE NASAL DOUCHE,

WITH A MODIFICATION IN CONSTRUCTION AND USE.

To the Editor of The Medical Record.

Sir:—When the nasal douche was introduced in the profession, it was hoped and felt that the problem of the treatment of naso-pharyngeal catarrh and ozena had been solved, as far as local treatment was considered; but after long and patient trial, the results have not been satisfactory; consequently the douche has fallen into disrepute, being regarded as a medium capable of doing much harm, and at best of but little good. The only credit that can be ascribed to it is, that it clears a temporary breathing space through the nostrils. The volume of water passing through the nozzle, as ordinarily used, is insignificant and never reaches the vault of the pharynx or the superior sinuses of the nasal cavity, as Dr. Beverley Robinson has shown in his communication to The Medical Record of August 1st, to which article I would call the attention of the reader.

I have used with much success the douche, after the following modification: I remove the glass nozzle and substitute a gutta-percha tube five inches in length and one-fourth of an inch in diameter, curved at the free end, corresponding nearly to that of a posterior nasal syringe, slightly flattened transversely. Thus prepared (the patient assuming the usual position, the head inclined forwards and downward) I carry the tube back into the pharynx, the stream is now forced against its vault, passing through the posterior nares, flooding the entire nasal cavity, flowing over the floor of the hard palate, and out anteriorly, clearing out all débris, if the solution is continued sufficiently long to soften the inspissated mucus, as may be seen on microscopic examination.

The tube may be grasped by the teeth, and, after some experience, a doucheful may be passed through in this manner without the least inconvenience to respiration or removal of it.

It is easy to understand that by this method violence cannot be done by the forcing of bubbles of air or water into the Eustachian tubes, as the current is directed from them.

I have derived the greatest benefit from a solution composed of carbolic acid, from ten to twelve drops to a doucheful of water, at a temperature of 103° F., or somewhat above blood heat.

The tube that I have used is made by Mr. Philip H. Schmidt, of No. 1275 Broadway.

GEORGE THOMPSON, M.D.

41 E. 10TH STREET, NEW YORK.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from September 19th to October 3d, 1874.

SMITH, J. R., Surgeon.—When relieved by Assistant Surgeon Koerper, to proceed to Fort Monroe, Va. S. O. 190, Mil. Div. of the Atlantic, September 24, 1874.

KINSMAN, JOHN H., Assistant Surgeon.—Leave of absence extended to November 1, 1874. S. O. 205, A. G. O., September 18, 1874.

KOERPER, E. A., Assistant Surgeon.—In addition to his duties at Detroit, Mich., to relieve Surgeon Smith of his duties at Fort Wayne, Mich. S. O. 190, c. s., Mil. Division of the Atlantic.

Medical Items and News.

NOMINATION OF OFFICERS IN THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK FOR THE ENSUING YEAR.—At the stated meeting held on Monday evening, Sept. 25, the following nominations were made of officers to be elected at the October meeting:

For *President*, H. B. Sands, J. O. Stone, J. C. Peters; for *Vice-President*, G. A. Peters, T. Addis Emmet; *Recording Secretary*, A. E. M. Purdy; *Corresponding Secretary*, F. A. Castle; *Treasurer*, S. Caro, F. P. Farnham; *Censors* (five to be chosen), E. Eliot, H. T. Hanks, S. Caro, J. C. Peters, R. A. Barry, A. H. Smith, C. M. Allin, A. Jacobi, F. P. Foster, C. P. Russel, J. E. Janvrin.

Delegates to State Medical Society (twenty-one to be elected): J. A. Monell, H. G. Piffard, T. R. Pooley, F. A. Castle, A. Jacobi, S. A. Raborg, L. De F. Woodruf, G. Bayles, J. C. Dalton, M. H. Henry, S. Caro, E. C. Harwood, J. P. Garrish, R. J. O'Sullivan, J. M. Smith, J. H. Emerson, W. H. Hall, C. M. Allin, A. B. Crosby, J. E. Janvrin, D. B. Hunt, F. P. Foster, F. V. White, A. H. Buck, Mary Putnam Jacobi, A. S. Jones, R. D. Nesmith, G. B. Fowler, E. Krackowizer, A. W. Stein, E. D. Ramsdell, F. B. Lawson, J. H. Leveridge, H. P. Farnham, H. B. Sands, A. E. M. Purdy, C. W. Packard, E. C. Simmons, H. T. Hanks, E. B. Warner.

RELATIVE TO VIVISECTION.—At a stated meeting of the Medical Society of the County of New York, held Monday evening, Sept. 25th, the following preamble and resolutions were unanimously adopted:

WHEREAS, It is believed that a movement has been inaugurated having for its object to abrogate or practically nullify the clause in the present law for the Prevention of Cruelty to Animals which declares that "nothing in this Act shall be construed to prohibit or interfere with any properly conducted scientific experiments or investigations," therefore,

Resolved, 1. That, in the opinion of this Society, investigations in Physiology and Pathology, by means of experiments on animals, are and have been the most fruitful source of increased knowledge with regard to the causes of disease and its means of prevention and cure.

2. That these experiments and investigations are habitually carried on by medical men without cruelty; nearly always without suffering to the animals employed, and never with any wanton infliction of pain or distress.

3. That authoritative interference, inspection, or control of these investigations by persons unacquainted with their methods and objects would necessarily defeat their aims and practically prevent their performance.

4. That the suppression of experimental investigations of this nature would arrest the progress of physiological science; would obstruct the acquisition of knowledge in regard to the causes of disease, and would be accordingly a disaster to the profession of medicine and to the welfare of mankind.

Also, *Resolved*, That for these reasons the members of this Society earnestly hope that the legal provision now existing, which recognizes the importance and value of such investigations, will be continued in full force and effect.

A MEDICAL JOURNAL IN JAPAN.—We have received two numbers of the *Modern Medical News*, the Japanese of which is *Kin-Se I-Setzu*. We are, however, inclined to the former name. The journals in question are curiosities in their way, not only in the character of paper, but in the manner of printing, binding, and type-setting. It is unnecessary to say that they are printed in the language of Japan, and would be very unintelligible to most searchers after the curious in medical literature. We have no doubt, however, that the articles are of real merit, and that the editor, Dr. Eldridge, has satisfactorily performed the duties of his office.

Of the woodcuts we can judge for ourselves, and say that they are really first class. We shall gladly place Dr. Eldridge's journal on our exchange list, and shall hope to be the means of informing him and his readers of the progress of medicine on this side of the Atlantic. It gives us pleasure to print the following letter from Dr. Eldridge, which explains itself:

HAKODATE, JAPAN, July 15, '74.

EDITOR OF THE MEDICAL RECORD.

SIR:—I send here with numbers I. and II. of the *Kin-Se I-Setzu*, or *Modern Medical News*, a bi-monthly medical journal in the Japanese language. This, the first medical journal published in Japan, is primarily in-

tended for a large class of native physicians who have already become somewhat acquainted with Western medical science, either by means of oral instruction or through the few existing translations of medical books, but who have no knowledge of any language save their own. The *Kin-Se I-Setzu* is published at Yedo, at the expense of the Imperial Government, and has, so far, a circulation of one thousand copies.

The contents of No. I., March, 1874, are:

1. Introduction, by Editor; 2. Introduction, by native Assistant; 3. On Removal of Tumors by the Elastic Ligature; 4. On the Relief of Pain, No. I.; 5. Quarantine Hygiene and the Cholera; 6. Diagnosis of Fatty Tumors by Cold; 7. Ergotine in Hemorrhage; 8. Easy Substitute for Proper Surgical Needles; 9. Removal of Foreign Bodies from the Ear; 10. Inspection of Imported Drugs and Medicines.

Of No. II., May, 1874:

1. Lectures on Urethral Stricture, by Editor—Lecture 1; 2. Surgery without Hemorrhage (Esmarch's method); 3. Apparatus for Digital Dislocations; 4. Government Inspection of Coal Oil; 5. On the Relief of Pain, No. 2; 6. Necessity for Education of Midwives in Japan; 7. Use of Salts of Copper in Cholera; 8. The Nitrite of Amyl, a new remedy in Asthma; 9. Rules for the Administration of Arsenic; 10. Oxide of Zinc in Diarrhœa of Infants; 11. Tincture Ferri Chloridi in Small-Pox; 12. Gelatine Suppositories in Fæcal Accumulation; 13. Treatment of Syphilitic Onychia; 14. Tincture Ferri Chloridi in Post-partum Hemorrhage; 15. Ergotine in Hemorrhage, Further Note on; 16. Glycerine as a Vehicle for Medicines, with Table of Solubilities; 17. New Sign of Death; 18. Worms in Heart and Blood-vessels of the Dog in China and Japan.

I am well aware that the *Kin-Se I-Setzu* can be of very little value to you, save as a curiosity; but I nevertheless request your assistance in a difficult, laborious, and pecuniarily unremunerative work, by asking that my journal be placed upon your exchange list.

Very respectfully,

STUART ELDRIDGE, M.D. (U. S.),
In charge Gov't Medical School, Hakodate,
Editor *Kin-Se I-Setzu*.

Address,
Care U. S. Consul,
Hakodate, Japan.

LAWS OF THE STATE OF NEW YORK RELATIVE TO CERTIFICATES OF LUNACY.

INSTANCES have come to our notice in which the lack of information in our courts regarding the new law relative to commitment of insane persons to asylums has given unnecessary trouble and expense to both physicians and friends of patients, and we therefore publish the first three sections of Article I., Title First, Chap. 446, of the Laws of the State of New York, as passed May 12th, 1874; these being the ones chiefly of interest to the examining physician.

Section 1. No person shall be committed to or confined as a patient in any asylum, public or private, or in any institution, home or retreat for the care and treatment of the insane, except upon the certificate of two physicians, under oath, setting forth the insanity of such person. But no person shall be held in confinement in any such asylum for more than five days, unless within that time such certificate be approved by a judge or justice of a court of record of the county or district in which the alleged lunatic resides, and said judge or justice may institute inquiry and take proofs as to any alleged lunacy before approving or disapproving of such certificate, and said judge or justice may, in his discretion, call a jury in each case to determine the question of lunacy.

§ 2. It shall not be lawful for any physician to certify to the insanity of any person for the purpose of securing his commitment to any asylum, unless said physician be of reputable character, a graduate of some incorporated medical college, a permanent resident of the State, and shall have been in the actual practice of his profession for at least three years; and such qualifications shall be certified to by a judge of any court of record. No certificate of insanity shall be made except after a personal examination of the party alleged to be insane, and according to forms prescribed by the State Commissioner on Lunacy, and every such certificate shall bear date of not more than ten days prior to such commitment.

§ 3. It shall not be lawful for any physician to certify to the insanity of any person for the purpose of committing him to an asylum of which the said physician is either the superintendent, proprietor, an officer or a regular professional attendant therein.

At present no printed blanks corresponding to the provisions of this law are to be obtained in the courts; we therefore append forms for a medical certificate, and for the Judge's certificate of qualification.

(FORM OF MEDICAL CERTIFICATE.)

STATE OF NEW YORK, }
COUNTY OF , } *ss.*:

I, , a resident of , in the county aforesaid, being a Graduate of , and having practised as a Physician, hereby certify, under oath, that on the day of , I personally examined of* and that the said is insane, and a proper person for care and treatment under the provisions of Chapter 446 of the Laws 1874.

I further certify that I have formed this opinion upon the following grounds, viz.: †

And I further declare that my qualifications as a Medical Examiner in Lunacy have been duly attested and certified by ‡

Sworn to and subscribed before me this day of , 187 . }

(JUDGE'S CERTIFICATE OF QUALIFICATION.)

STATE OF NEW YORK, }
COUNTY OF , } *ss.*:

I hereby certify that , of , is personally known to me as a reputable Physician, and is possessed of the qualifications required by Chapter 446 of the Laws of 1874.

FRANCIS EDMUND ANSTIE, M.D., F.R.C.P., who was so well known to all our readers, died at his home in London on the 12th of September. *The Lancet*, on the editorial staff of which he had so long been a worker, gives a very feeling obituary, from which we take a few facts regarding his life.

Dr. Anstie was born at Devizes, on the 11th of December, 1833. He was the second son of a manufacturer in easy circumstances; and his family had been established in the locality for several generations. . . . Francis, after being educated at a private school at Devizes, which he left in 1849, was articled in the following year to his cousin, Mr. Thomas Anstie, a medical practitioner of the town. According to the

* [Here insert sex, aged, married or single, and occupation.]
† [Here insert facts upon which such opinion rests.]
‡ [Here insert the name of the Judge granting such certificate.]

custom of those days he remained with his cousin three years; and entered at King's College in 1853. He passed through the ordinary medical curriculum with credit, and gained the Gill prize for general proficiency at the end of his first winter session. He was a steady worker both at the college and in the hospital, where he was an enthusiastic disciple of Dr. Todd, under whom he served as clinical clerk, and whose teaching gave a manifest color to his whole professional life. In 1857, being as yet undecided with regard to his future line of practice, he took the post of resident physician-accoucheur's assistant in the hospital. In the autumn of the same year he took his M.B. degree at the University of London, and was for some time occupied in administering chloroform for Sir W. Ferguson. After this he lived for a short time in Stamford street; but in 1859 he moved to Onslow square, and was appointed physician to the Chelsea Dispensary. By this time he had determined to practice medicine: and having been appointed pathologist to Westminster Hospital, he was elected assistant-physician and co-lecturer on Forensic Medicine in 1860, in the vacancy caused by the transference of Dr. Russell Reynolds to University College. He subsequently exchanged his lectureship for that on Materia Medica, which he held for many years, his course being devoted rather to the therapeutic action of drugs than to matters of mere detail. In 1862 he married, and from thenceforward devoted himself far more closely to the practical business of his calling, displaying a power of steady and sustained work that had previously lain in abeyance, and that rapidly brought him into the first rank of his contemporaries. In 1863 he removed to the house in Wimpole street, in which the rest of his life was spent; and in the following year published his well-known work on Stimulants and Narcotics, chiefly the results of experimental research conducted at the Westminster Hospital. His tenure of office as assistant physician was prolonged for thirteen years, during which he applied himself to the work of the out-patient department with an energy and solicitude that never flagged. About a year ago he succeeded to the post of physician, and was enabled to give full scope in the wards to those powers of clinical teaching which his long work among out-patients had cultivated to the utmost. For a short time he shared the lectureship on medicine with Dr. Basham, but had lately given the full course, in a manner which elicited the warm admiration of those who heard him. Besides his appointment at the Westminster Hospital, he was physician to the Belgrave Hospital for Children, and consulting physician to the Royal South London Ophthalmic Hospital. It need no longer be a secret that the most flattering overtures were made to him from New York, to settle there as a hospital physician and consultant, and a lecturer on the principles and practice of physic; but family reasons, and the feeling of growing success in England, prevented him from assenting to a proposal which was none the less gratifying that it came from those who knew him only by his professional reputation. His last work, and that on which his future fame will chiefly rest, was his admirable treatise on Neuralgia, on a second edition of which he was engaged at the time of his decease.

Besides his books, Dr. Anstie was a frequent writer of more fugitive literature. He contributed occasional articles on scientific subjects to various non-medical papers, and was for years a member of the editorial staff of *The Lancet*. In that capacity he was the chief member of The Lancet Commission to inquire into the state of the workhouses, and took a principal part in conducting the inquiries and writing the reports.

In July, 1869, he became sole editor of *The Practitioner*, which, during the first year of its existence, he had edited in conjunction with Dr. Lawson, and which has ever since been indebted for its high position to his sound judgment, his constant industry, and his ready pen.

Dr. Anstie became a Fellow of the College of Physicians in 1865, and was now recognized as a power in that venerable institution, where his voice was raised in support of every proposal which was calculated to increase the dignity or to extend the usefulness of the College. He was much interested in the recent improvements in the manner of electing Fellows, as well as in the negotiations for the conjoint scheme of examination; and he was the prime mover of the Petition to the Premier on the subject of the overcrowded dwellings of the poor. In two directions, therefore, in the reform of workhouses and in the limitation of the power of railways to sweep away needful habitations, his efforts led immediately to legislation for the public good.

The circumstances of his death will form part of the history of the profession. The schools of the Patriotic Fund at Wadsworth had been visited by a somewhat strange succession of illnesses, and at last some of the children were attacked by a rapidly fatal form of peritonitis. Dr. Anstie was called in to the assistance of the medical officer, and he made a careful examination both of the premises and of the patients. He was at the time suffering from over-work and want of rest, and was, perhaps, hardly in a state to undertake the oftentimes dangerous duty of a medico-sanitary inspection; but after accomplishing it, he made, on Sunday, the 6th, a post-mortem examination of one of the children who had died from peritonitis. Whilst thus engaged, the middle finger of his right hand was accidentally punctured with a needle. He sucked and washed the wound immediately, and on Tuesday mentioned the occurrence to some of his friends, but expressed a hope that no harm would result from it. On Wednesday he felt ill, and complained of pain in his right arm-pit. During the afternoon he was so chilly that he sat before a fire wearing an overcoat. Dining with a friend in the evening, he spoke of having poisoned his hand, and said that he had much pain in the armpit, that he feared he would have an abscess there. On Thursday he was confined to his bed, and Dr. Brudenell Carter found him with a dry tongue, a dry, hot skin, and complaining of distressing headache, and of much pain over the right pectoral region. After a restless night the patient was worse on Friday, and the assistance of Dr. George Johnson was obtained. At three P.M. on Friday he was delirious, his tongue dry, and his temperature 105°. There was an erysipelatous blush about the size of the palm of the hand over the right pectoral muscle; there was excessive tenderness on pressure in the right axilla and over the front of the chest, on the right side. His condition at half-past nine the same evening remained unchanged. At half-past nine Saturday morning the breathing was very rapid; there was a distinct friction sound over the middle and lower lobe of the right lung, and dulness on percussion over the same space, the erysipelatous redness and tenderness remained the same. The urine was highly albuminous, and contained numerous epithelial casts. About the middle of the day symptoms of a blood-clot at the right side of the heart came on; the features were livid; the breathing rapid and shallow; consciousness was rapidly lost, and death occurred at half-past two P.M.

Medical Department of Life Insurance.

LIFE INSURANCE PRACTICALLY CONSIDERED.

By THEODORE PARKER, M.D.,

OF NEW YORK CITY.

Life Insurance has grown to such vast proportions, and its benefits are being so widely extended, that the public and its managers are equally interested in its prosperity, and the union of various companies, within a short period, for mutual consultation, interchange of opinion and experience, shows the newly awakened interest of its managers.

So far its mortality has been too great, and after ascertaining the cause, a new and early departure must be made.

It is to be regretted that hitherto, while treated and discussed fully in its business aspects, its medical relations, if not ignored, have escaped that attention which their first importance demands, and the opinions of its medical staff in its councils have been unheard, or deemed of minor importance. It is an earnest now of its progress, that the medical department, among several able officers, is receiving that attention which must result in general good.

It may not therefore be deemed inopportune to offer a few views of a practical character, which in the many interesting communications upon the subject have been but lightly touched upon, and which experience has demonstrated to the writer to be of vital importance, not only to the welfare of the companies, but of equal interest to their medical representatives. First, as to the

SELECTION OF EXAMINERS.

The company or home office must select, entirely independently of the agent and in advance of agencies, examiners who are men of character, strict integrity, and firmness; in other words, men who are thoroughly *reliable, competent, and prompt;* and when selected, no examinations should be received from others, unless in the absence or illness of the selected examiner, when an alternate, approved by himself and the company, might be temporarily employed. The examiner's certificate should be sent from and by the home office to the examiner for him to fill up, notifying him at the same time that he is the selected permanent medical representative of the company for his locality. Of the various plans by different companies of arriving at this object—the selection of proper examiners—some are faulty, others too expensive, and generally so far unsatisfactory. It may be asked here, How is the home office to accomplish this, and select proper examiners at a distance? Can they be certain they have made no mistake in the selection? The reply is, it has been and is being done daily; but to dwell upon or explain the best method would extend too far the limits of this article, and belongs more properly to business management. Now as to the

RELATION OF THE EXAMINER TO THE COMPANY.

The examiner should understand fully his true relation to the company. He should know that all selections and appointments are made by the *home office*, and not by the agent. He should understand that the company or home office pays him for every examination, whether favorable or not, though the agent, for convenience, may be allowed to hand him the regular fee prescribed by the company; that a proposition from an agent or applicant to pay him an extra fee, or any commission upon cases examined by him, or any other than the company fee, is attempted bribery, and when an examiner so far forgets his self-respect, the dignity of his calling, and his true relation to the company as to listen to such a proposition, he is no longer a proper examiner.

In every case the examiner should consider himself as representing the company, and not the agent or applicant. In passing upon applicants he should know no friendship and should give the company the benefit of all doubts; that in cases where a necessarily rather hurried examination fails at the time to discover any organic disease, and yet the general appearance or complexion suggests to the experienced physician a doubt as to the safety of the risk (cases have been improperly recommended because as stated the examination shows no disease), such cases should never be recommended without an additional private note to the company, putting them in possession of those facts which could not otherwise be known, unless by an examination at the home office.

Again, the relation of the examiner to the applicant is often a very peculiar and delicate one. He is perhaps his regular physician, or that of his family and relatives. He knows of private matters, tendencies to disease, or evil habits—important information for the company—and yet obtained alone through this intimate and confidential relationship. His interests would all appear to be on the side of the applicant, but he feels that he cannot conscientiously recommend him. The agent allowed to select his own examiner finds another who will. Unless he passes the case, he expects to incur the ill-will of the agent, applicant, relatives, and friends. If he is a man of sufficient firmness to do his duty, he may brave all this and make the sacrifice. There are those who do not consider it expedient to make this sacrifice, and think they should be allowed to recommend any risk, while putting the company in possession of all the facts. These should send a private note with full explanations to the home office, for the company must depend upon their fidelity to its interests. Again, it is hardly just that the examiner should injure himself pecuniarily in the service of the company, unless the pay for his services should be in proportion to the injury sustained. Hence, while the system of having the application and examiner's reports upon the same sheet remains in force, the only remedy seems to be extra private correspondence in every case between the examiner and the medical department of the home office.

Under the present general system of paying solicitors or agents, their income being derived from the number of cases insured, good or bad, there is a strong inducement for them to sacrifice quality to quantity, and as self-interest warps the judgment with some, the effect is to forward any application which a pliable or ignorant physician will recommend; the agent reasoning with himself in this way: "I am not a doctor, and am not supposed to know a healthy from an unhealthy subject; the company must look to their examiner for this; it is his business not mine." This is true in cases where the company has selected its own examiner independently of the agent, and they will be safe in doing so; but where the agent has selected his own examiner, and made his own terms with him, and can discharge him at will, the company would be safer, or as safe, to dispense with the examination altogether, and accept the risk upon the recommendation of the agent, making him alone responsible.

A prominent insurance officer, several years ago, stated to the writer that from his experience he was beginning to believe that medical examinations were of little value in life insurance. The reply was: "Under the present system of selecting examiners I agree with you perfectly, and consider them worse than useless. But with the selection of proper examiners by the company, and not by the agent, examinations are of inestimable value, and indeed are the sheet-anchor of life insurance, the one great and only source of safety for the company." The results have since confirmed and proved beyond a doubt the views then expressed.

FOR SUCCESS,

the company must look to the honest, disinterested, and impartial judgment and report of the examiner to protect them against doubtful or bad risks. The honesty of the examiner is the first, and by far the most important point, next his professional skill; for the highest professional ability, without honesty and faithfulness to the company's interests, furnishes no protection whatever.

It is for this reason that an examiner of but moderate professional attainments, possessing this honesty, is often preferred to others of much greater reputations, who are easy, careless, or accommodating.

Those companies that succeed and continue to merit public confidence must secure both, viz.: the strictest integrity and the best medical talent. When these are added to a prompt discharge of duty, they may hope to do a safe business, and look for a greatly diminished mortality. Failure is only a question of time with any company that receives examinations from any physician who can fill up a readable examiner's certificate at the request of the agent, and of whom the home office knows nothing except the favorable reports furnished perhaps by his own references.

SOLICITORS NOT AGENTS.

Furthermore, the term agent is a misnomer, and calculated to mislead inexperienced examiners. The solicitor for life insurance is in no sense of the term an agent of the company, and the distinction should be clearly defined by the company, and should be fully understood by the examiner. Cases have occurred where the examiner felt some doubt as to the propriety of recommending certain risks. His doubts have been removed by the remark from the agent: "It is certainly not a first-class risk, but recommend it, and we will take it upon some plan or other." The examiner has been greatly chagrined to learn afterwards, when his reputation was at stake, that the term *we* did not represent the interests of the company, but those of the individual agent himself.

While there are agents who, if they fail to get an impaired life insured in one company, will have it "go the rounds," there are honorable exceptions who identify themselves with the company and guard its interests; but a few of the baser sort, with the aid of unreliable examiners, can do an incalculable amount of injury, and neutralize the best directed efforts of the others.

There should be full, free, confidential and constant correspondence between the examiner and the medical department of the home office. Confidential it must necessarily be, for the subject is one involving not alone length of life and pecuniary obligations, but in many instances reputation itself.

In reference to the professional attainments or qualifications of the examiner, or the proper method of making examinations, it is not the design of this article to speak. As to the third point, however,

PROMPTNESS,

The necessity of this is sometimes overlooked. For instance, the company has selected an examiner of known integrity and thoroughly competent. When called upon by the agent to make an examination, he perhaps replies: "Bring the applicant to my office;" or, "When convenient I will call and examine him." Either of these would be fatal to the business of an agency. Perhaps when in the presence of an applicant, he may discuss the subject of life insurance in a way to discourage him. This would also be doing great injury to the company employing him. He forgets for the moment that the whole matter has been fully discussed before he is called upon, and his duties are to examine and report the results of examination, with his opinion, to the company. He should reflect that he is not expected by the company to solicit; but, on the other hand, he should be careful to do nothing which could injure or embarrass the efforts of the solicitor. He should *act promptly*, give all the information to the company bearing upon the risk, as he alone has the applicant before him, then his opinion; for upon these facts and opinion the insurance committee must depend to decide upon acceptance or rejection. He should do this faithfully, and then concern himself no further as to the fate of the application, for there his responsibility ends. As long as he reports fully and truthfully though the risk may be rejected, he still enjoys the full confidence of the company, and what to many is more, the consciousness of a faithful discharge of duty.

THE CHAMBER OF LIFE INSURANCE.

BEFORE this reaches the eyes of the readers of the RECORD, the Chamber of Life Insurance will have held its quarterly meeting, and determined what course to pursue in regard to the question of medical examiners. From the very beginning this journal has strongly advocated the wisdom of placing the system of appointing medical examiners upon a more solid and independent basis, and has urged the plan of a single list of examiners, to be appointed by some central authority—be it a committee or an individual—who shall act solely in the interest of the companies, or, which is the same thing, of the great mass of policyholders. It has advocated this plan for two reasons: first, because it believes that it will prove better for the life insurance companies; and second, because it will certainly in the main prove a benefit to the medical profession. It is not necessary to discuss these points again, for they have already been fully discussed in previous issues of the RECORD, and besides, by the time this is made public, the opportunity for discussion will have passed by. Suffice it to say that the Committee, appointed by the Chamber to consider this subject, has brought in a report recommending the adoption of some plan of this kind, and the forthcoming meeting (already held on the 13th ult.) is to be devoted chiefly to the discussion of the Committee's report.

It is difficult to predict what will be the action taken by the Chamber upon the recommendations made by its Committee at the last quarterly meeting. The different medical directors are either strongly in favor of those recommendations, or else are indifferent about the whole question; none, so far as we are aware, are opposed to the carrying out of the plan

under discussion. It is doubtful, though, whether the influence of the medical directors upon their lay colleagues, the presidents and secretaries of the different companies, will be sufficient to overcome the objections which they will be likely to advance against such a change. What these objections will be, we only know in part. The agents, it is said, will be unwilling to submit to the new régime; business will be interrupted by the necessity of employing only the regularly-appointed examiners; the plan will cost more money than it is worth, etc.;—these, and many more, are the reasons brought forward by some against the change. The Chamber, however, is composed of a goodly number of sound, practical business men, who will not be likely to vote against any well-digested plan of reform, unless there is some serious and tangible reason why it should not be carried into effect.

THE SPIROMETER — ITS VALUE AND UTILITY TO LIFE COMPANIES.

By Dr. W. GLEITSMANN,

of Baltimore.*

Life Insurance is the fulfilment of a sacred duty. By its means a man provides that the weight of pecuniary care shall not be added to the sorrow of those who are called to mourn his death. That life insurance companies should employ all the means that they can command for securing their protection against loss, is but simple justice to those offering them *bona fide* risks.

The purpose of the present article is briefly to consider one of these means of protection—a careful medical examination. In comparing a table of questions of the present day with one of a few years ago, the progress made by life insurance companies in this respect will be readily recognized. But notwithstanding the guarantee against the admission of unsound risks afforded by a scrupulous examination, and by the greatly improved method of examination resulting from the advance of medical science, yet surely every aid to a still deeper insight into any conditions affecting the applicant's health should be attentively considered.

The enemy which life insurance companies most dread, and labor mostear nestly to discern, is consumption, whether actually existing in a latent form, or merely threatening in the future. In the daily practice of a physician many cases occur where the most rigorous medical examination fails to trace the source of the malady which will but shortly after overwhelm its victim. This is very often the case with apparently healthy young persons, who, by reason of their social position, offer a large contingent for life insurance. In cases of this kind the spirometer is of especial value as a means of recognizing the threatened danger. Although it may not afford positive certainty, yet it challenges a renewed and more careful examination. This instrument is constructed to show the capacity of the lungs by the volume of air blown into it in one forced expiration. Such capacity is pretty nearly constant in one and the same person, varying only with the altered condition of the individual, as, for instance, change of bodily position, weariness after exertion, full or empty stomach, frequently repeated respirations, and the like. If these accidental circumstances are taken into consideration, the same person will nearly always exhibit the same capacity on the spirometer. It must not be supposed, however, that it is enough to let the individual in question blow into the spirometer, and simply to read off the indicated number. It is necessary in the first instance to find the number appropriate to each person by calculation before comparing it with the actual figure presented; only when both correspond entirely, or at least in part, can the result be looked upon as satisfactory. The spirometer will be deprived of much of its value, if, in comparing the numbers indicated by two persons, we conclude the one to be less healthy and strong than the other, because their respective capacities differ. Frequently the question is addressed to me, whether the number represented is a proof of sound lungs; but the answer will only suit the individual case. One man, for instance, having a larger capacity than another, can carry the seed of the disease, whilst the other is sound. A great many points have to be taken into consideration in determining the capacity of the lungs on the spirometer, of which I will only mention the three leading ones:—size, sex, age. It must be left to the physician to sum up the capacity depending on these different influences. Provided the calculated number accords with that shown on the spirometer, and that no unusual symptoms manifest themselves, the applicant may be declared sound. Whenever the medical examination results in any suspicious observations, the spirometer will not fail to confirm them by falling short of the calculated number. A large number of cases comes under observation, to which I chiefly desire to draw the reader's attention, where an ordinary examination gives no indication of disease of the lungs, but where the spirometer shows a more or less palpable divergence from the calculated number. They are generally persons in their younger years, who either possess the medically so-called phthisical habitus, or who have lost some relative by the disease. The affirmation of this is but too frequently met with in practice, and I could quote conclusive evidence from spirometrical data contained in hand-books, if my space permitted. When we meet such a case in practice, the proof on the spirometer will at once animate us to repeat our examination with unusual attention in order that we may perhaps succeed in discovering grounds for a definite opinion, that have hitherto escaped us. Should we fail in this, we have to base our judgment all the more cautiously on the remaining indications, in proportion to the difference existing between the actual and calculated spirometrical numbers.

In advocating the use of the spirometer for life insurance purposes, I desire, therefore, not to be understood to imply what is sometimes erroneously believed, that the spirometer is of itself sufficient to establish a diagnosis of a person's state of health. It is only purposed to corroborate the results of a medical examination, or, in case of deviation, to induce increased caution in passing judgment on the applicant's health. In order to prove how vastly important these facts are to life insurance companies, I will conclude by giving a few statistics. According to the reports of the Board of Health there occurred in the

City of Baltimore in 1872, of 1,000 inhabitants,		3.20	deaths by Phthisis.
" " 1873, of 1,000	"	3.65	"
" Philadelphia, 1872, of 1,000	"	1.10	"
" San Francisco, 1873, of 1,000	"	2.57	"
" St. Louis in 1872, of 1,000	"	1.29	"

As the death-rate by phthisis is here only exhibited in its proportion to the total population, it might be anticipated that life insurers are more favorably circumstanced, owing to the fact that here we only deal

* From the Baltimore Underwriter, August 20, 1874.

with carefully selected lives; but such is not the case. According to a publication of the Royal Prussian Statistical Bureau, by Dr. Oldendorff—a compilation of nineteen annual reports of German life insurance companies for the year 1871—the number of deaths by phthisis amongst a thousand insured averaged 3.79, that is to say, a larger percentage than is exhibited by the total population of Baltimore, Philadelphia, San Francisco, and St. Louis. It is conceded that phthisis is, at any rate, not more frequent in Germany than in the United States. These short proofs may serve to support the views already expressed, that life insurance companies should carefully consider every mode of assistance for obtaining the most reliable opinion on the applicant's health. I have no doubt that they will urge the universal adoption of this additional method of examination as soon as they have learnt fully to appreciate its scientific value.

DISEASES CAUSED BY THE INHALATION OF DUST.

By Dr. GOTTLIEB MERKEL,

of Nuernberg, Germany.

Translated by Dr. Horatio Bridge, of New York City.

(Continued from the August 15th Number of The Medical Record.)

III.

CROUPOUS PNEUMONIA.

The entire mode of origin and the course of croupous pneumonia, according to my apprehension of this disease, are of such a nature that we cannot reckon the inhalation of dust among the immediate causes of croupous inflammation of the lungs. We can recognize an indirect connection only by considering that through other diseases of the organs of respiration previously incurred, the lungs become more sensitive to those injurious influences which are capable of inducing in them a croupous inflammation.

Hirt tells of a cotton-weaver, thirty-one years old, born of healthy parents, who, in his thirteenth year on leaving the school began to learn weaving. Four weeks after entering upon his dusty employment, without having suffered previously with catarrh, he was seized with croupous pneumonia in the left side. After complete recovery, having resumed his work only a few months, he was attacked by a fresh pneumonia, which in his nineteenth year was followed by a third attack. During the three following years of service in the army he continued well; but on resuming his trade again, after only six weeks of work, he was seized for the fourth time with pneumonia; he underwent a fifth attack in his twenty-ninth year, and Hirt treated him for a sixth in 1868.

It is, indeed, not to be denied that the repeated occurrence of pneumonia immediately on resumption of work is in the highest degree remarkable; still, we must not forget that, as Hirt states, a lung which has once undergone an attack of pneumonia, although it may have completely recovered, nevertheless remains very frequently a locus minoris resistentiæ, and that under such circumstances the pure air, and especially the obligatory exercise in the open air in military service, can and must exert only a beneficial influence, and that finally the return into the atmosphere of the little work-room (in his father's house) containing three spinning machines, where the air was at best only very imperfectly renewed—this, I say, alone offered a predisposing cause for the occurrence of a fresh croupous pneumonia. Still, setting aside this consideration, this is only a single case, which, indeed, shows the urgent necessity for further investigation, but, of course, cannot be considered as affording any positive conclusion in reference to dust inhalation as a proximate cause of croupous pneumonia.

I have given special attention to this subject, of the inhalation of dust, for seven years, and out of 500 cases of croupous pneumonia, with seventy-five fatal cases (all of which underwent a post-mortem examination), I have not heard one ascribed to the inhalation of dust, nor seen a case where such a cause could be proved.

In one single case I observed in the cadaver, around a necrotic portion of a lung affected with iron rust, a narrow zone of lung tissue, which broke down easily, was deprived of air, and seemed to be infiltrated with the products of croupous pneumonia; and once I found in the lung of a man working upon the protoxide of iron exquisite gray hepatizations with clearly marked fibrinous plugs in the bronchioles. In this last case, moreover, an injurious influence from without had produced its effect upon the lung. The patient—in whose case the dependence of the phthisis upon the inhalation of dust had already been diagnosticated—was discharged at his own request, in order that he might arrange his business affairs, which absolutely demanded his attention. At the end of eight days, during which he had exposed himself to a very marked diminution of temperature, he returned to the hospital with a croupous pneumonia, acquired two days before, and died from the attack. Such a case, however, cannot properly, in our estimation, be cited here as an example.*

Hirt in his work endeavors to prove, by means of statistics, that workmen exposed to dust afford by far the largest contingent to the sum total of those affected with croupous pneumonia. In reference to my own judgment in the premises upon the worth and significance of statistics, I refer the reader to that which I shall introduce further on, and remark simply, what I have already stated in the beginning, that this increased frequency is sufficiently explained by the well-established fact that there are large bodies of men the parenchyma of whose lungs is exceedingly vulnerable and especially disposed to be affected with croupous pneumonia, and that to this class belong those men especially who live under conditions which make immoderate demands upon their organs of respiration, and which circumstances in and of themselves place them at once in an abnormal state. In this category, therefore, we must include, before all others, those who live in an atmosphere which obliges them to breathe in, along with the air necessary for respiration, substances irritating to their respiratory organs. Such an increased disposition to croupous inflammation of the lungs is not, then, to be ascribed to dust as such, but rather to its irritating effect upon the bronchial mucous membrane, which is thereby put into an abnormally vulnerable condition as regards inflammation.

In regard to the pathologico-anatomical condition, we do not, of course, expect to find anything different from the well-known lesions of croupous pneumonia, and the hepatized lung of the man working on protoxide of iron, whose case was mentioned above, perfectly justifies this supposition, since the usual ap-

* I wish to say here once again, with especial emphasis, that all that is here stated relates to the croupous, and not to the catarrhal or desquamative pneumonia.

pearance of gray hepatization appeared, modified only through black deposits in form of stripes and spots.

According to a remark in Hirt's work, Coetsem appears to have given in his work on "Pneumonie Cotonneuse" more exact statements concerning the course and symptoms of this disease. To my regret I have been unable to obtain possession of a copy of the original article by Coetsem, which would have enabled me to give more positive opinions on these points.

From all that has been stated, we may set it down as established that workers in dust are more disposed to suffer from croupous inflammation of the lungs than other men; only we must remember at the same time that inhalation of dust is not to be regarded as the immediate, but simply as the predisposing cause for this disease.

In like manner it is established as a fact that the symptoms of pneumonia among workers in dust are the same as those which may be observed in others sick with this disease, and that the pathological lesions found after death are precisely the same as those observed in ordinary cases.

Whether the prognosis of a pneumonia occurring in a workman exposed to dust will differ from that in other pneumonias, depends, according to my opinion, upon two things: first, whether the respiratory organs were already previously affected (through catarrh, emphysema, etc.), and whether thereby the constitution of the workman had already been somewhat undermined; and secondly, whether the inspired dust had already penetrated into the tissue of the lungs, and perchance already induced anatomical changes, which would naturally give to a fresh additional disease quite a different importance from what it would otherwise possess.

Now, with regard to the diagnosis of the disease, in so far as its connection with the inhalation of dust is concerned, we must insist upon the importance of an exact history of the case in all its details as the best means of directing our opinion to its real nature. It should, however, be added, that the inquiry in reference to occupation should extend back not only to the last few seasons, but into the past years; for we have seen cases in which serious trouble first declared itself years after the patient had quitted his dusty occupation.

The sputa will indeed throw light upon the diagnosis, but will only make it certain in those cases in which they are found to contain free dust particles together with portions of the lung (elastic fibres); in such cases, however, disintegration has already clearly begun its work. We shall have more to say on this point further on. Dust particles enclosed in cells will be found only among those workmen who have worked within the last two or three weeks in a dusty atmosphere. While the discovery of these elements will of course be of value as regards prognosis, I have already shown how the same information may be obtained through the history of the case.

The treatment cannot, of course, differ in anywise from that of the common croupous pneumonia. The occurrence of this disease in a workman exposed to dust naturally makes it the duty of the physician to inform his patient of the danger of his occupation, as well as of the increased danger of relapses.

IV.

CHRONIC PNEUMONIA—CIRRHOSIS OF THE LUNG—PHTHISIS PULMONALIS.

When one considers how utterly powerless therapeutic measures are in advanced stages of the diseases mentioned in the title of this chapter, he will welcome every hint, however slight, which may throw light on the question, how to ward off the disease. But before we can with any propriety speak of the prophylaxis of specified diseases, we must understand exactly their causes. It is upon such methods of reasoning that those recent works are based which are designed to throw light upon the etiology of phthisis pulmonalis, that disease which, according to the report of mortuary statistics, sacrifices relatively the greatest number of lives, and in our hospitals is answerable for nearly one-half the deaths.

After what has already been said concerning the action of dust upon the respiratory organs, it will not excite wonder when we state that the continued inhalation of dusty air affords one of the most frequent causes of these forms of lung disease.

In the first place, we must consider the direct irritation of the bronchial mucous membrane caused by the continued inhalation of fine, and often sharply cutting molecules. We have stated above that there are men whose respiratory organs possess so great a degree of resistance to injuries of this kind, that after they have successfully recovered from the first acute, or, perchance, second chronic catarrh of the bronchiæ, they become completely acclimatized to their dusty atmosphere, and continue to work in it up to extreme old age, without experiencing very much trouble from their more or less injured lungs.

If this were not so, the relative percentage of mortality from chronic lung affections would indeed be very much larger than it is in reality.

On the other hand, however, all are not so fortunate in escaping. To gain some idea of the extent to which the lungs of our laborers are subjected to injurious influences, we have but to call to mind the fact that in Nürnberg, according to a very rough estimate—one indeed that falls 33 per cent. below the truth—there are actually 5,000 workmen engaged in occupations which are extremely dusty. When we consider, furthermore, that these workmen came from families whose hygienic surroundings are unfavorable; that just in these classes hereditary influence plays a most important part; that they are paid wretchedly small wages, and are consequently poorly clothed and fed; that they are often very irregular and dissipated in their habits; that there is gross negligence on the part of the employer as well as of the workmen in the observance of certain precautionary measures; when we consider all these things, I say, we can readily appreciate how greatly increased is the danger to life in these particular occupations.

Whoever reads attentively the regularly published mortality lists of our city will not fail to observe that, for instance, all ultramarine workmen, all iron-founders, etc., die of "consumption."

On the other hand, the irritating action of dust, so apt as it is to produce catarrhs, is not the sole agent in inducing more serious disease of the lungs; we must also take into account the direct action of dust molecules upon the lung parenchyma itself, that is, the changes effected in the tissue of the lung by dust particles which have become deeply implanted in it.

In both cases, however, the long-continued irritation causes chronic diseases of the lung substance, which in turn threaten life. We must next consider the consequences of chronic catarrh, in so far as it gives rise to more serious affections of the bronchial mucous membrane, to ulcerations, through whose encroachments upon the neighboring lung tissue bronchiectatic cavities are produced, and later on, phthisis of the lungs. We must also consider those effects which

are due to the progressive action of the inflammatory process upon the peribronchial tissue, leading to peribronchitic infiltration, which in turn, through cheesy degeneration, can give rise partly in a direct way to suppuration in the lungs, and partly indirectly (through resorption) to true tubercle. It is not of less importance to remember that the termination in thickening and shrinking of the parenchyma, in cirrhosis of the lungs, not infrequently occurs in cases of long-continued chronic catarrhs and of uninterrupted irritation caused by the inspiration of deleterious wounding substances. We would again mention that in this section those diseases only are discussed which are favored by the inhalation of dust. We cannot, therefore, furnish here for these forms a separate and distinct pathologico-anatomical description; the picture is the same as that which can be found in any text-book treating of the subject. In nowise will the course of the disease be changed; at the most it will become more chronic than in the ordinary cases. The treatment also remains the same.

STATISTICAL APPENDIX.

What we here introduce is taken from Hirt's work, already often quoted. Since statistical statements, as such, in matters of this nature, are very apt to mislead, they can only, in our estimation, serve as a reliable means of drawing conclusions when they fully include all workmen who are exposed to the common injurious influences; and that in turn is only possible in large factories, where, in the first place, the number of workmen is large enough to be of importance, where nearly all the workmen live under almost precisely the same circumstances, and where accurate lists are kept of their sicknesses and deaths. When lists of this description can be obtained, we acknowledge the great worth of the statistics; but they are still, however, very few in number, and unfortunately exclude those workmen who indeed are exposed to injurious agencies (those above mentioned), but who do not labor together in large numbers (as in factories). Cases of this kind, however, frequently come under the notice of the private practitioner.

In addition to this it should be said that it is not an easy matter to obtain from large factories the proper statistical material, for in many it is simply not to be found, and in others interested persons guard these results of factory work with as much anxiety as they would the private records of business. It has happened to me that, while in small factories the whole business was most willingly shown, I was politely requested not to express in the work-rooms any opinion concerning those things connected with the business which were dangerous to health. Hirt has also had the experience that in such factories he was not even admitted within the doors. I was promised a very complete statistical statement relating to the diseases and deaths in one of the largest factories in Nürnberg, in which dust in large amount was whirled about through the air, and this promise was again withdrawn because I had published in the feuilleton of one of the city journals an article upon diseases caused by the inhalation of dust, in which I spoke specially of a fatal case of lung disease caused by dust in that very factory. This publication was looked upon as a meddlesome investigation into the secret affairs of the business, as an attempt to make the workmen discontented.

A statistical statement concerning workmen as they are to be found here and there in different employments would be of great importance. Upon this point, of course, only the records of large hospitals could give information, and in pursuance of this idea, knowing that in our city hospital (which was opened twenty-eight years ago) very accurate records and case-books were kept, I endeavored to collect statistics relating simply to consumption. But I soon quickly convinced myself that this task, requiring so much exertion and expenditure of time, would yield very insufficient returns, and I have at present wholly given it up. The first and most important obstacle is this, the impossibility of obtaining a correct representation of the number of workmen exposed to dust inhalation. A large machine factory, for instance, employs about 400 workmen, the half of whom perhaps are exposed to dust in very different degrees, the other half not at all, but all are of course classed as factory hands. Then, again, employments are so frequently changed. A woman who now serves as a domestic was perchance until within a year engaged from six to ten years in one of the most dangerous dust occupations (such cases we have repeatedly observed), and of this circumstance one can find no record in the journal or case-book. A second still more productive source of error lies in the circumstance that all those suffering with chronic lung diseases can be discharged even though not cured, and in consequence, after a longer or shorter time they return to the hospital. In one year they may return as often as two, three, or even four times, and each time they are inscribed in the journal with a fresh number, and this difficulty cannot possibly be rectified. Since large numbers are requisite to accuracy, the record of one year is insufficient; a large number of years must be taken together; but with an increased number of years the error of reckoning increases.*

On the other hand, we have the incontrovertible fact that each person can die but once, for the reason that only a single bill of mortality is published. But in the same it is above all important, if it is designed to be accurate, that the whole number of those engaged in the employments alluded to should be known, and to obtain this is exceedingly difficult, is especially so now—in fact almost impossible—since free-trade has gained so universal an ascendency.

I am, therefore, unfortunately unable to present a complete statistical statement, which would establish the truth of so many principles above stated. Hirt has endeavored to collect statistics upon this subject. In dedicating his book to Professor von Bamberger, he says that the task which he originally proposed for himself presupposed long years of study and painstaking. He has nevertheless done his best. He has collected as far as possible numbers from the larger factories; on the 25th page of his book he gives the respectable number of 12,647 workmen exposed to dust, and obtains from the same the following deductions:

I.

The relative frequency of chronic bronchial catarrhs among workmen exposed to dust.

Out of one hundred patients chronic bronchial catarrh occurred in the following frequency:

Metallic Dust.	Mineral Dust.	Vegetable Dust.	Animal Dust.	Mixed Dust.
14.8	11.8	19.0	18.6	18.4

In our city hospital, according to an average (estimated) from the records of twenty years, 7.53% of

* According to our poor-laws, sick persons are cared for by the commonwealth in which they work only ninety days for one and the same sickness: after that time the patient has to look for further cure and assistance to his native town. The result of this is, that all strangers, after their ninety days have expired, must be taken to their native place, while those claiming a residence here appear again and again at the cost of our city.

all diseases were bronchial catarrhs due to dust inhalation.*

II.

The relative frequency of emphysema among workers in dust.

The percentage of emphysematous cases was as follows:

Metallic Dust.	Mineral Dust.	Vegetable Dust.	Animal Dust.	Mixed Dust.
3.1	9.0	4.7	3.0	5.1

In our hospital, according to an average for twenty years, 0.55% of all diseases.*

III.

Relative frequency of pneumonia among workmen exposed to dust.

The percentage of cases of pneumonia was as follows:

Metallic Dust.	Mineral Dust.	Vegetable Dust.	Animal Dust.	Mixed Dust.	No Dust.
7.4	5.9	9 4	7.7	6.0	4.6

In our hospital, according to an average for twenty years, 3.13% of all diseases.*

IV.

Relative frequency of phthisis among workmen exposed to dust.

The percentage of phthisical cases was as follows:

Metallic Dust.	Mineral Dust.	Vegetable Dust.	Animal Dust.	Mixed Dust.	No Dust.
28.0	25.2	13.3	20.8	22.6	11.1

In our hospital, according to an average for twenty years, 7.28% of all diseases.*

The principal works on dust-inhalation and the diseases caused by it, are the following:—

Ramazzini, De morbis artificum diatribe. Ultrajecti 1703.—*Bubbe*, De spadone hippocratico lapicidarum Scebergensium haemoptysin et phthisin pulmonum praecedente. Halae 1721.—*Pearson*, Philosoph. transact. pars II. 1813.—*Laennec*, Traité de l'auscultation médiate. II. édit. Paris 1826.—*Gregory*, Edinburgh Med. and Surg. Journ. Vol. 36. 1831.—*Thomson*, Medico-chirurg. Transactions, Vol. 20 et 21. 1837 et 1838. —*Virchow*, Archiv für pathologische Anatomie. Band I. 1847.—*Brockmann*, Die metallurgischen Krankheiten des Oberharzes. Osterode, 1851.—*Robin et Verdeil*, Traité de chimie anatomique. Tom. III. 1853.—*Traube*, Ueber das Eindringen feiner Kohlentheilchen in das Innere des Respirationsapparates. Deutsche Klinik 1860. Nr. 49 u. 50. und 1866 Nr. 3.—*Henle* (Ueber Lungenpigment), Handbuch der systematischen Anatomie. Band II. 1862.—*Maurice, Villaret*, S. die Artikel über Lungenmelanose in Schmidt's Jahrbüchern, Band 115 u. 116. 1862.—*Lewin*, Beiträge zur Inhalationstherapie. Berlin 1863.—*Greenhow*, Cases illustrating the pathology of the pulmonary disease frequent among razor-grinders, stoneworkers, colliers, etc. 1864–1865; second series, third series 1865–66, 1868–69; und Virchow und Hirsch Jahresbericht pro 1871. Band II. Abth. I. S. 129.—*Feltz*, Maladie des tailleurs de pierres. Strasbourg 1865.—*Zenker* (Tabaklunge), Amtlicher Bericht über die 40. Naturforscher-Versammlung in Hannover 1865. S. 271.—*Crocque* (Ueber Anthrakose); Schmidt's Jahrbücher Band 126. S. 98. 1865.—*Zenker*, Ueber Staubinhalationskrankheiten der Lungen. Deutsches Archiv für klinische Medicin. Band II. Heft I. 1866.—*Kussmaul* u. *Schmidt*, die Aschenbestandtheile der Lungen. Deutsches Arch. f. klin. Med. Band II. Heft 2. 1866.—*Seltmann*, Die Anthrakosis der Lungen bei den Kohlenbergarbeitern. Deutsches Arch. f. klin. Med. Band II. Heft 3. 1866.—*Virchow*, Ueber das Lungenschwarz. Archiv, Band 35. H. I. 1866,—*Rosenthal*, Wiener medic. Jahrb. (Schmidt's Jahrbücher Band 132. 1866.—*Koschlakoff*, Zur Frage über die Entstehung des Pigmentes der Lunge. Virchow's Archiv. Band 35. Heft I. 1866.—*Knauff*, Das Pigment der Respirationsorgane. Virchow's Archiv. Band 39. Heft 3. 1867.—*Slavjansky*, Experimentelle Beiträge zur Pneumonokoniosis-Lehre. Virchow's Archiv. Band 48. Heft 2. 1869.—*Merkel*, Casuistische Beiträge zur Pneumonokoniosis-Lehre. Deutsches Arch. f. klin. Med. Bd. VI., VIII. u. IX. 1869 bis 1872.—*Meinel*, Ueber die Erkrankung der Lunge durch Kieselstaubinhalation. Erlanger Dissertation 1869.—*Hirt*, Krankheiten der Arbeiter. Abtheil. I. Theil I. Die Staubinhalationskrankheiten. Breslau 1871.—*Ross*, Diseases of the lungs, affecting those who work in dusty atmospheres. Dub. quart. Journ. of med. S. February 1871.—*Rindfleisch*, Lehrbuch der pathologischen Gewebelehre. III. Auflage. Leipzig 1873. S. 382 ff.

(To be continued.)

* The numbers from the Nürnberg city hospital are given for the sake of comparison.

RATE OF MORTALITY IN DIFFERENT CITIES.

In the way of contribution to the records of the development of the rate of mortality in metropolitan life, the subjoined statistics, collated and tabulated in the form of a comparative exhibit of the death-rate of the principal cities of Europe and America during the year 1873, will be found interesting. It is a subject for congratulation that the registration of these cities is so carefully and faithfully conducted, though the fact that so little practical use has been made of their teachings is less cheering. The waste of life in our cities from preventable causes is enormous, so much so as to be discreditable to our civilization; yet with the perception and acknowledgment of the need of steps for checking it, the progress of sanitary reform has been slow. Efforts have been made, time and labor and money have been expended for the improvement of sanitary conditions and of the health of the population, yet the results are by no means satisfactory. In some cases the data show that while the general conditions of human life at the present day are more favorable to increased vitality, the actual experience has been discouraging.

The data showing the sanitary state of thirteen leading European and Asiatic cities are taken from quarterly reports, and are as follows:—

Cities.	First Qr.		Second Qr.		Third Qr.		Fourth Qr.		Annual Rate.
	No. Deaths.	Rate per 1,000 living.	No. Deaths.	Rate per 1,000 living.	No. Deaths.	Rate per 1,000 living.	No. Deaths.	Rate per 1,000 living.	
London	18,970	22.7	16,690	20	18,234	21.8	20,898	25.0	22.4
Paris	11,088	24.4	10,555	23	10,589	23.0	10,269	22.5	23.2
Brussels	1,218	26.5	1,144	25	1,190	25.8	1,015	22.0	24.8
Berlin	5,745	29.9	6,699	33	8,627	41.8	4,913	25.8	32.6
Vienna	5,335	34.4	4,804	30	7,004	43.6	3,667	22.8	32.7
Rome	1,963	32.2	1,724	28	1,827	30.0	1,648	27.0	29.3
Florence	1,542	31.6	.....	....	1,270	30.5	.....	....	31.0
Turin	1,615	30.4	1,524	29	1,267	24.1	1,122	22.8	26.6
Calcutta	3,643	32.1	2,606	23	2,446	21.9	2,687	26.0	25.8
Bombay	4,448	27.6	3,906	24	3,674	22.8	3,592	22.2	24.2
Madras	3,702	37.6	3,684	37	3,485	35.2	.....	....	36.6
Amsterdam	....	....	1,725	25	1,604	23.2	1,480	23.0	23.7
Copenhagen	.....	.....	.....	....	1,286	25.8	.....	.....	25.8

In the following statement will be found a tabular expression for the past year of the population, number of deaths, and the ratio of death per thousand, of nine of the principal cities of the United States.

Cities.	Estimated Population.	Deaths.	Rate per 1,000 living.
New York	1,040,000	29,084	27.96
Philadelphia	750,000	15,224	20.29
St. Louis	450,000	8,551	19.00
Brooklyn	435,314	10,968	25.19
Baltimore	305,000	7,614	24.96
New Orleans	278,060	7,505	37.05
Boston	276,579	7,869	28.45
Cincinnati	246,923	5,641	22.84
Richmond	60,705	2,037	33.39

—*Baltimore Underwriter.*

LIFE INSURANCE AND SANITARY REGULATIONS.*

THE *Versicherungs Zeitung*, of Berlin, in a recent number, urges the claims of life insurance companies upon the state for the maintenance of proper sanitary regulations. A large proportion of the deaths which occur are the indirect result of unfavorable hygienic conditions, and have for their immediate cause the small-pox, scarlet fever, or some other disease originating in them belonging to that large class of diseases to which Dr. Farr has given the name zymotic—a name which has been adopted into general use. Our German contemporary argues that the mortuary records of the companies do not fairly represent the full number of deaths which are really due to diseases of this class. In these records a great many deaths are attributed to disorders such as consumption, acute or chronic inflammation of the lungs, inflammation of the kidneys, affections of the stomach or scalp, degeneration of the tissues when the origin of these disorders may be traced back to some disease of a zymotic character. The peculiarity of the zymotic diseases is, that they either directly produce degeneration in some tissue or organ, or leave behind them, after an apparent cure, a tendency to or predisposition for some other disease. It is frequently the case that inflammation of the lungs or of the kidneys can be traced back with certainty to some previous illness. Many instances must be within the recollection of every one, whether belonging to the medical profession or not, of difficulties of the chest or other complaints which have set in after a recovery from typhus or slow fever, an interval generally occurring between the original disease and the subsequent one. A careful consideration of the deaths which are ascribed to consumption, with reference to the remote cause of the disease which produced them, will help to elucidate the subject. In Germany, the medical examinations for the life insurance companies are made with the most anxious care, and yet it is astonishing to note the extent to which consumption figures in the mortality returns of the companies. This cannot possibly be explained unless reference is had to the effects left by zymotic diseases behind them. Family history is inquired into upon the examination, and in coming to a decision the facts in regard to it are duly weighed. The consumption, when death occurs from that cause, must either have already had its beginning at the time of the examination or it must have been developed during the period covered by the insurance. If in existence, its presence is ordinarily revealed at the examination by some external sign, or can be discovered, even by a tyro in medical art, through percussion or auscultation. Medical examiners, besides, generally make use of the stethoscope or plessimeter. But, admitting that cases occasionally occur in which incipient consumption, whether inherited or not, through mistake, ignorance or otherwise, escapes detection, there will still remain a large proportion of the deaths attributed to consumption in which the tuberculosis must have originated during the period covered by the insurance. We think that it will be found, upon careful examination of these cases, that only a very few of them can be explained by the operation of external causes, such as the atmosphere, employment, climate, or voluntary exposure. Some other originating cause must be sought in order to account for a considerable part of that class of disorders popularly known under the general name of pulmonary complaints, and—*hic haeret aqua*—here come in the zymotic diseases as an explanation. It is obvious that if no insurance had ever been granted upon these lives, the companies would have avoided a number of losses. These deaths are returned under various heads, and probably form a considerable percentage of the whole number. In these observations we have not lost sight of the fact that large regions, and even whole continents, like that of North America, are peculiarly subject to consumption, and that particular callings are also peculiarly subject to it; the variations from the normal rate of mortality produced by these causes are rather apparent than real, because they are offset by the increased probability assigned to inheritance, and by the allowance made for extra exposure. The main point which we wish to urge is, that great importance belongs to zymotic diseases among the factors, of which the combined result is found in the aggregate mortality of the life insurance companies. The opinion is gradually gaining ground among insurers that the probable duration of life does not depend solely on the quantity of vital force originally possessed, but rather upon the final balance struck in the account always kept between the vital force on the one side and the unfavorable influences to which the individual is exposed on the other. It is a problem in mathematics, in which the sum of vital force is represented by a number of units, from which are to be subtracted successively numbers corresponding to the influences of climate, employment, occupation, zymotic disease, etc., which tend to destroy human life. The problem cannot be stated in actual figures, but the illustration serves to show that when any of the quantities of the subtrahend can be diminished or eliminated, the result will be favorably affected. Hence the importance of taking up arms to combat these influences. When deaths which might have been prevented are caused directly by zymotic disease, the insurance companies suffer an immediate loss, which might have been saved. But the companies suffer a heavy loss no less when these diseases, after having been apparently cured, are succeeded, after a time, by other diseases, which terminate fatally, and the terms during which the stipulated premiums are paid are thereby cut short. The premiums were based upon the assumption that the payments would continue in accordance with the mortality tables. In comparison with the loss of future premiums, the agents' commissions, physicians' fees, and other expenses of procuring new business, sink into insignificance. The very existence of a company may be imperiled by the loss of them. We agree with the *Versicherungs Zeitung*, that the time has arrived for government intervention, and that the interests of life insurance urgently demand that proper hygienic regulations should be enacted and rigidly enforced.

* From the Insurance Times of October 1, 1874.

Original Lectures.

A CLINICAL LECTURE

ON THE

TREATMENT OF POPLITEAL ANEURISM

ACCORDING TO THE

METHODS OF FLEXION AND COMPRESSION.

By H. B. SANDS, M.D.,

SURGEON TO THE ROOSEVELT HOSPITAL.

GENTLEMEN:—During my present term of service in this hospital two cases of popliteal aneurism have been treated with success. One of these was cured by compression of the femoral artery, and the other by flexion of the leg. As these methods of treatment have hardly yet obtained among us the preference to which they are perhaps entitled, I may profitably occupy your time in presenting to you, in the first place, a brief history of each of the cases referred to; and, in the second place, in setting before you the principles of both plans of treatment, in order that you may be enabled to estimate their relative value as surgical expedients.*

CASE I. *Popliteal Aneurism cured by Digital and Instrumental Pressure.*—Alfred Barnes, a native of England, aged 31, entered the Roosevelt Hospital April 4th, 1874, for the treatment of a popliteal aneurism, the symptoms of which had first been noticed six months previous to admission. The patient had been treated for rheumatism, and was somewhat pale and anæmic. The aneurism affected the right limb, and formed a large tumor which, longitudinally, slightly exceeded the limits of the popliteal space, and extended laterally beneath the hamstring. The circumference of the diseased limb at the upper border of the patella was 16½ inches, while the corresponding measurement of the opposite side was 13½ inches. Pulsation could be felt over the entire surface of the tumor, but was most distinct on its external aspect along the edge of the biceps tendon. The aneurismal thrill and murmur were both well marked. The tumor was tender on pressure, and the patient complained of severe pain at night. Within forty-eight hours after his admission the aneurismal tumor became more prominent, and the integument covering it somewhat discolored; the temperature in the axilla also rose to 102°, and the patient complained of feverishness and loss of appetite. Fearing that the aneurism was on the point of becoming diffused, and regarding the patient's constitutional disturbance as a contra-indication to the operation of ligation, I determined to try the effect of digital compression of the femoral artery against the horizontal ramus of the pubes. This was begun on the evening of April 8th, the pressure being made either by the patient himself or by some one of the patients in the hospital ward.

April 9th. Digital compression was continued last night from 6 to 11 o'clock, and resumed at 5 A.M. today. The patient bears the pressure well. The skin beneath the compressing finger is kept dusted with a powder composed of lycopodium and oxide of zinc. At 6 P.M. pressure was resumed, it having been remitted during the afternoon on account of pain, to relieve which morphine was administered.

April 11th, 12 M. Up to the present time, pressure has accomplished nothing; but it has been very ineffectually made by hospital patients. It was now recommenced by relays of medical students, twelve of my pupils having kindly volunteered their services for the occasion. Digital pressure was maintained continually until 10 P.M., when a modified Carte's compressor was applied, and the pressure of the two pads alternated every hour during the night. The force employed was just sufficient to arrest the pulsation of the aneurism.

April 12th, 10 A.M. Instrumental pressure having caused considerable soreness, the compressor was removed, and digital pressure maintained until 10 P.M. Patient complains of pain in the leg and foot, and the pulsation of the tumor is growing indistinct.

April 13th. Instrumental pressure was continued during the night and until 2 P.M. to-day; then digital pressure until 10 P.M. At 3 P.M. the tumor was examined, when it was discovered that it had become quite firm, and that pulsation, murmur, and thrill had entirely disappeared. The skin covering the tumor, however, still remaining hot and red, the application of an ice-bag was ordered.

April 16th. Since last date pressure has been continued, with the alternation of manual and instrumental compression every twelve hours. At 3 P.M. the treatment by pressure was discontinued.

June 1st. The cure effected seems to be permanent, and the tumor has nearly disappeared. The flexor muscles of the foot, which have been paralyzed, are slowly regaining their power; and the leg which, at the time of the patient's admission, was immovably flexed upon the thigh at an angle of 120°, has now, by the aid of a weight and pulley, become nearly straight.

CASE II. *Popliteal Aneurism cured by Flexion.*—Edward P., aged 31, entered the Roosevelt Hospital on the 23d of May, 1874. Habits somewhat intemperate. Patient first felt pain in the right popliteal region a month previous to admission, and a fortnight afterward discovered a swelling behind the knee-joint. Five days before admission, after a long drive, he suffered so severely from pain in the foot and leg that he went to bed and remained there until he came to the hospital. Meanwhile he noticed an increase in the size of the tumor. He is still deprived of sleep by pain, and is unable to take morphine, which is said to cause convulsions. On examination a soft, pulsating tumor, presenting all the characters of an aneurism, is found high up in the ham, extending from the upper third of the popliteal space upward for a distance of 4½ inches. Laterally it extends through the whole thickness of the thigh, but is most prominent on its inner aspect. The following measurements indicate the comparative dimensions of the opposite limbs:

	Right.	Left.
Circumference of calf of leg	14 in.	12½ in.
" over tubercle of tibia.	13½ "	12½ "
" over middle of knee..	16½ "	14½ "
" over most prominent part of tumor, 1 inch above patella	16½ "	13½ "
" of thigh, 2 inches above patella....	16½ "	13½ "

It is found that flexion of the leg at a right angle

* I am indebted to my House-Surgeon, Dr. Blauvelt, and to his Assistant, Dr. Fowsmith, for the notes of the above cases.

arrests the pulsation of the tumor. Ordered 3 ss. of chloral at bedtime.

May 24th. Patient has had a comfortable night. At 2 P.M. he was put upon a water-bed and the treatment by flexion was begun. The leg, having been bandaged from the toes to the knee, was bent upon the thigh at a right angle, and retained in that position by an additional roller bandage. This degree of flexion stopped pulsation and caused hardly any pain. Twenty grains of chloral were given at bedtime.

May 25th. Patient has passed a good night and does not complain of pain. At 2.30 P.M.—twenty-four and a half hours after the treatment by flexion was begun—the limb was examined by Drs. Sands and Peters, and when extended no pulsation could be perceived in the tumor, which, however, was not very firm. Flexion was now resumed, and chloral prescribed, in scruple doses, whenever necessary, to relieve pain.

May 26th. Tumor becoming firm. Patient has had less pain than before the leg was flexed. Same treatment continued.

May 31st. Bandages removed and patient allowed to gradually extend the leg. The following measurements exhibit the diminution which has taken place in the size of the diseased limb since the treatment was begun:

	May 24.	May 31.
Over calf of leg	14 in.	13 in.
" tubercle of tibia	13½ "	12½ "
" centre of knee	16½ "	15¾ "
" most prominent part of tumor.	16¾ "	15½ "
" thigh, 2 inches above patella	16½ "	15⅜ "

June 16th. Since the last date the tumor has rapidly diminished in size, and can now no longer be discovered. Measurements, such as those taken previous to treatment, show that the dimensions of the opposite limbs are alike. Patient discharged cured.

Such, gentlemen, is the narrative of these two interesting cases of a formidable surgical disease, both, happily, cured by methods of treatment at once safe and simple. Let me briefly refer to the history of each of these methods, and endeavor to point out to you the circumstances in which they are applicable.

The compression-method of treating aneurism is not new, although its success is of recent date. An allusion to the subject is made by Avicenna, but the earliest cases that possess any interest are those recorded during the latter half of the seventeenth century by Rivière, Bourdelot, Tulpius, and Brommelius, whose results were published as successful. The aneurisms treated were generally those of the brachial artery, and were of traumatic origin, having been occasioned by an accidental wound of the artery at the bend of the elbow, during the operation of venesection. In these early attempts, also, the compression was made by means of a bandage applied directly over the aneurismal tumor; and pressure of the afferent artery was carefully avoided, as it was believed by the surgeons of that period that such pressure might cause the obliteration of the artery, and that gangrene would then inevitably follow. About the middle of the eighteenth century Guattani had recourse to this method for the cure of popliteal aneurism. Of eleven reported cases, four are said to have been successful. Such a degree of success would not be deemed flattering at the present day; but at the period referred to, when the old and cruel practice of opening the aneurismal sac was the alternative, it was calculated to afford encouragement, and indicated an advance in surgical art. The introduction of the Hunterian operation, a few years later, and the remarkable success which attended the ligature of the femoral artery in cases of popliteal aneurism, eclipsed, for the time, the treatment by pressure; and it was subsequently proved that pressure, to be effectual, should be applied, not to the tumor itself, but to the artery leading to it. The direct compression of the aneurismal tumor having been abandoned in favor of better methods, I need not consider it at any length; yet, as it has been shown to be successful, we may, perhaps, speculate briefly upon the *rationale* of its operation. Viewed in the light of our present knowledge, such treatment would, at first sight, appear to be irrational. As you are doubtless aware, the various methods for the cure of aneurism have this feature in common, namely, that they aim at causing a coagulation, either slow or rapid, of the blood contained within the sac. Now, the effect of the application of a tight bandage to the aneurism would be to empty the sac of its contents, and thus prevent a cure; for the adhesion of the opposite walls of the sac, and the consequent obliteration of the latter, can rarely if ever happen. It is highly probable that where direct compression proves successful, it does so by causing the formation of a coagulum, and that its *modus operandi* does not, therefore, differ essentially from that of the more approved methods. If the sac is already partly filled with coagula, the application of external pressure may, by retarding the passage of the blood through it, determine the completion of the coagulating process; and it may, also, favor the contraction of the sac itself. Or it may cause a clot, already existing, to be displaced in such a manner as to obstruct the distal orifice of the sac; in which event the circulation through the latter will be arrested and coagulation thereby rendered probable. An interesting example of the cure of an aneurism by the impaction of a coagulum in its distal orifice, is afforded by a patient now in Ward 5, whose case many of you have watched with interest during the past month. This man entered the hospital with a well-marked aneurism of the upper third of the left axillary artery; the tumor could be felt both above and below the clavicle. The patient stated that shortly before his admission, and after a very hard day's work, he suddenly felt an intense pain in his left arm, and on examination found that his radial pulse had stopped. When he came under my care I could detect no pulsation either in the radial, the ulnar, or the brachial artery, whereas each of these vessels pulsated strongly upon the opposite side. Inferring that on the occasion just alluded to, the passage of the blood through the sac had been suddenly arrested by the impaction of a clot in the axillary artery, I predicted the possible occurrence of a spontaneous cure, and I was gratified to observe that the tumor steadily diminished in volume, and that six weeks after his admission it had entirely disappeared.

There is yet another way in which direct compression may prove curative, and that is, by causing inflammation of the sac. Inflammation thus excited, however, is apt to prove unmanageable, and to terminate in suppuration of the sac, with its attendant danger of fatal hemorrhage. If the pressure is not evenly distributed, or if it is too great, an eschar may be produced; and when this separates uncontrollable hemorrhage may ensue. Again, the walls of an aneurismal sac are sometimes weak, and have occasionally ruptured under the influence of external pressure. In

a word, then, the treatment of aneurism by direct pressure must be regarded as nearly obsolete, and as applicable only to aneurisms of small size, and of traumatic origin. In idiopathic aneurisms, and especially in those affecting the popliteal artery, the method is inferior to many others, and is attended with risks which should be avoided.

Far otherwise is it with the method of compression called *indirect*, to which I now invite your attention. We shall find that this method of treatment, while less dangerous than that of direct compression, is far more successful in its results; and that it is especially adapted for the management of that form of aneurism now under consideration. It consists, as you are perhaps aware, in making pressure upon the artery leading to the sac. Now, the principle of this method of treatment so nearly resembles that of the ligature, that you will not be surprised when I tell you that these two methods were conceived at about the same period. The compression of an artery had for a long time been practised for the arrest of hemorrhage; but the date of its adoption as a mode of curing aneurism coincides almost exactly with that of John Hunter's first operation by the ligature. In fact, it is recorded that in 1785, only a few months prior to Hunter's operation, this celebrated surgeon held consultation with seven of his colleagues upon a case of popliteal aneurism; and that they decided to resort to compression of the femoral artery in the groin. The treatment was discontinued on account of pain; but six months afterward the aneurism disappeared spontaneously. During many subsequent years the compression-treatment made little progress; it was seldom tried, and when tried, was rarely successful. Bruckner, a German surgeon, is said to have had the first successful case. He began by employing the ordinary tourniquet, which, however, could not be borne by the patient. He then adapted a sort of horseshoe tourniquet, and alternated the pressure between two points along the course of the artery. The treatment seems to have been intermittent, and to have extended over a period of two years. In other successful cases, reported at this early period, the cure was often very tardily accomplished, and many months of treatment were found necessary to bring about the desired result. This fact was due partly to the use of imperfect instruments, and partly to an unfounded apprehension of gangrene, as the probable result of a complete arrest of the circulation through the artery compressed. Meanwhile, the ligature of the femoral artery in Scarpa's space was proved, by experience, to be so well adapted for the cure of popliteal aneurism, that both patients and surgeons preferred the cutting operation, even with its risks, to the tedious, painful, and uncertain method of compression, as then practised. But it has happened in this case, as in many others, that an old method has been so perfected as to acquire almost the claim of an original invention; and the merit of reviving the compression-treatment of aneurism, and of placing it upon an established basis, unquestionably belongs to the surgeons of Dublin. Prior to their investigations the method had few advocates; while now, hardly any one can be found to dispute its value.

Before proceeding further, let me state to you certain changes of opinion respecting the *modus operandi* of the pressure treatment, which took place before the Irish surgeons so completely demonstrated its success. As I have already mentioned, in the earlier trials of this method, the compression exerted upon the afferent artery was only slight, as it was generally believed that gangrene of the limb would ensue unless this precaution were taken. To this circumstance we may doubtless attribute the rarity of success, and the length of time required, in favorable cases, to effect a cure. So soon, however, as the safety of the ligature was established, professional opinion ran to the opposite extreme; and many surgeons maintained that the obliteration of the artery, and the consequent permanent interruption of the circulation through it, were indispensable elements of success. As we shall see hereafter, this opinion was erroneous; and it naturally led to the employment of extreme pressure, which often proved intolerable, and sometimes injurious. In several cases treated by Boyer, early in the present century, the compressing instrument caused sloughing of the soft parts, which, in at least one instance, was followed by fatal hemorrhage from the femoral artery.

During the course of these trials it was ascertained that, in some of the successful cases, the artery which had been compressed remained pervious after the completion of the cure. This led to a recognition of the fact that the cure of an aneurism depended not necessarily upon the occlusion of the afferent artery, but upon the consolidation of the contents of the sac.

In 1820, Dr. Todd, of Dublin, advocated the employment of compression, with the object, not of obliterating the artery, but of simply retarding the current of blood through it, so as to favor the coagulation of that contained in the sac. His practice, however, was not very successful, and found but few imitators; and it was only after the lapse of twenty years that the correctness of his theory was attested by the experience of the Dublin surgeons. In 1843, Mr. Hulton, of the Richmond Hospital, effected the cure of a popliteal aneurism by instrumental pressure kept up for only six days. In the same year three other cases were cured, by compression, in the Dublin hospitals; and in one of these the pressure was continued for only two days. From that time onward the utility of the practice has been generally admitted; and in an interesting paper published by Mr. Bellingham, in the thirty-fourth vol. of the Medico-Chirurgical Transactions, that surgeon has reported all the cases of popliteal or femoral aneurism that had been treated in Dublin by compression during a period of seven years—from 1843 to 1850. Of 26 tabulated cases of popliteal aneurism, 21 are said to have been entirely cured, and no death had occurred which could be ascribed to the use of pressure. One patient died of erysipelas; but as galvano-puncture was here employed in combination with pressure, it is to this fact that we must attribute the intercurrent disease which proved fatal. When the results of the compression-treatment, as above described, are contrasted with those obtained by the use of the ligature, the value of the former method becomes still more striking; for statistics show that the ligature of the femoral artery has proved fatal in about fifteen per cent. of the published cases; and the actual ratio of mortality must be considerably higher, as it is well known that many unsuccessful cases are never reported. You naturally inquire, then, why the compression-treatment has not entirely superseded that by ligation, and the answer is twofold. In the first place, compression has succeeded better in the hands of the Dublin surgeons than elsewhere; and, in the second place, the operation of ligation is less troublesome, and when skilfully performed, is reasonably sure to succeed. The late Mr. Syme stated, some years ago, that up to that time he had tied the femoral artery in thirty-three cases, without a single failure. Whether the subsequent experience of that distinguished surgeon was equally fortu-

nate, I am not aware; but, doubtless, the unexampled success which he recorded was due, in no slight degree, to his acknowledged skill as an operator. You see, then, of how little value surgical statistics may be, in deciding upon the merits of a particular method of treatment, since a method which in itself leaves little or nothing to be desired, may, in the hands of the average practitioner, meet with very indifferent success. Bearing this fact in mind, let us examine the details of the compression-treatment, and endeavor to ascertain the best mode of conducting it. My remarks will be confined to the subject of popliteal aneurism. Now, compression of the femoral artery may be made either by the fingers alone or by means of an instrument; and I shall first speak of instrumental compression. The instruments which have been employed are various. Todd used an apparatus almost identical with an ordinary hernia-truss—the spring, however, being stronger. Such an instrument is inadequate for its object. A favorite plan with Bellingham, and other Dublin surgeons, consists in the employment of a weight of lead, of a conical shape; this is supported at the sides, and made to bear directly upon a compress placed over the course of the artery. I cannot show you this kind of instrument; but there is one at St. Luke's Hospital, which has been used without success, it having been found impossible to prevent the displacement of the weight, during the movements of the patient. Several modifications of Signorini's horseshoe tourniquet have been recommended; but I shall not detain you with a description of them, as I can occupy your time more profitably by exhibiting to you the apparatus which was used in the case I have narrated, and which fulfils all the indications better than any other one I have seen. It

was made by Matthieu, of Paris, and bears, if I am not mistaken, the name of the French surgeon Broca; it is evidently, however, only a modification of the compressor invented many years ago by Carte, of Dublin. It consists in the first place of a padded steel trough, which receives the thigh, and which serves for making counter-pressure. Attached to the outer side of the principal piece are two jointed steel rods, which are curved above the patient's thigh, and carry the screws that make pressure upon the pads. The latter are made of India-rubber, and are of various shapes and sizes. The several joints, you see, which give to the apparatus a complicated appearance, enable the surgeon to alter the position of the screws carrying the pads, so that the latter may be made to press in any desired direction. Lastly, the curved steel rods can be moved longitudinally upon a metallic bar, thus permitting the pressure to be made, from time to time, at various points in the course of the artery, as circumstances may require. The instrument referred to has the following advantages. It is light, and, although somewhat complicated, is easily managed. It permits the alternation of pressure between the two pads, and the application of pressure at any point in the course of the artery, and at any desired angle of incidence. Moreover, the pressure, although effected by means of a screw, is elastic, from the presence of the steel arch which carries it, and of the rubber pad upon which it acts.

Being provided, then, with a suitable instrument—and it is idle to undertake the treatment with an imperfect one—you adjust it, having previously placed the patient upon a good, firm bed. This latter point is important; for unless the patient is so placed the apparatus is liable to get deranged. Moreover, as the treatment is irksome, and often extends over a considerable period, nothing should be neglected that is calculated to promote the patient's comfort. The apparatus having been applied, the treatment is begun by screwing one of the pads against the artery. The point usually at first selected is where the vessel passes out of the pelvis, as here it can be easily compressed against the horizontal ramus of the pubic bone; while in Hunter's canal, also, the artery may be pretty effectually compressed against the femur, but in Scarpa's space the circulation is with difficulty controlled, owing to the yielding nature of the soft parts upon which the artery rests. Between these two points, then, the pressure is alternated—such alternation being necessary to relieve pain, and to guard against excoriation or sloughing of the skin. The latter should be dusted with some fine powder, such as lycopodium or pulverized French chalk, which will lessen the tendency to abrasion. The administration of anodynes at night is often necessary to induce sleep, and I have found nothing that answers this purpose better than the hydrate of chloral.

Two important questions present themselves in the treatment of aneurism by compression. Shall the pressure be continual or intermittent; and shall it be partial, so as to retard the current of blood through the artery; or total, so as to arrest it? Upon both these points a considerable difference of opinion has prevailed; and I am not myself prepared to speak dogmatically. In regard to the first question, whether the pressure shall be continued or intermittent, I think it is one the decision of which rests rather with the patient than with the surgeon. Provided the former can bear it, there appears to be no reason why the pressure should be remitted. But you must not forget that long-continued pressure is very painful, and that it may be followed by sloughing of the soft parts. Your duty, then, is to ascertain the degree of toleration of the patient, and to regulate your treatment accordingly. It is gratifying to know, however, that intermittent pressure often suffices for a cure; and in a paper read before the British Medical Association in 1871, by Dr. Macnamara, of Dublin, it is stated that

in that city the mode of treatment then in vogue was to make compression only during the night, this plan having been found to work well.

The second question, namely, whether the compression of the artery should be partial or total, is one that is not easily answered; and the answer will depend not so much upon the recorded experience of surgeons as upon the theoretical views which you may be led to entertain respecting the process by which an aneurism is cured. When the cure is spontaneous, as it sometimes is in aortic aneurism, the sac is found to be filled with a firm, fibrinous mass, which is generally distinctly laminated; and there is some reason to believe that these layers of fibrine have been gradually deposited from the circulating blood. Now it is generally admitted that to promote the formation of such a deposit it is only necessary to retard the passage of the blood through the sac, and not to cause its stagnation; nay, it is even affirmed by Broca and others that the complete arrest of the circulation through the sac will be followed by the simple formation of a soft, spongy clot; and that this clot, being incapable of organization, will probably act as a foreign body, and set up suppuration of the sac, with all its evil consequences. With the first part of this statement I fully agree, and therefore I have nothing to say in condemnation of those who resort to partial compression. That such compression is adequate to effect a cure is shown, not only by theory, but by abundant experience; and the difficult point to determine will be, I think, the precise degree of retardation of the circulating fluid which may be necessary in a given case. Provided the right amount of pressure has been made, and a deposit of fibrine has taken place, the aneurismal tumor will become firmer, and its pulsation will gradually cease. The cure by this method will rarely be rapid, and may result only after the lapse of weeks or months. Partial compression is, of course, less painful than total compression, and is attended with less danger of excoriation or sloughing. But it not infrequently fails to cure the aneurism, and the alternative of the ligature is presented.

Total compression has been condemned by eminent surgeons, but, I think, upon insufficient grounds. Experience has clearly shown that the gradual deposit of stratified fibrine is not requisite for the consolidation of an aneurism, and that a cure may result equally from the rapid or even sudden formation of a coagulum. This must happen, for instance, where a ligature is applied to the common carotid artery for an aneurism affecting that vessel above the point of ligature. In this case, as there are no collateral branches between the ligature and the sac, there can be no circulation through the latter, and the blood which it contains must speedily coagulate. The clot, it is true, may soften, and act as a foreign body; yet this accident is possibly too rare to affect the general result. Moreover, in popliteal aneurism, the anastomotic channels are sufficiently numerous to insure the passage of a certain quantity of blood through the sac, even when the main artery is entirely obstructed; and that this circulation may be very free is shown by the fact that ligature of the femoral sometimes fails to cure—the pulsation of the sac being only temporarily arrested, and consolidation never taking place. On the other hand, it should be borne in mind that where rapid coagulation results from compression before the anastomotic vessels have had time to enlarge, the danger of gangrene must be greater than where partial compression is employed; and this consideration may perhaps determine our practice, if the patient is advanced in life, or has ossified arteries or a feeble circulation.

It is surprising how rapidly an aneurism may sometimes be cured by total compression. Many examples are on record in which consolidation has taken place within twenty-four hours; and Mr. Cooper Forster* has reported a case in which pressure for three and a half hours sufficed for a permanent cure. But the most remarkable instance which has come to my knowledge is one reported quite recently in London.† The patient, a man aged 78, had an aneurism of the femoral artery of the size of an orange, situated six inches below Poupart's ligament. It had resulted from a kick. It was cured by compression in ninety minutes. The efficacy of total compression is further shown in cases which have been treated by this method after an unsuccessful trial of partial compression. Mr. Prescott Hewitt applied partial compression for five months in a case of popliteal aneurism. The result being unsuccessful, total compression was tried, and brought about consolidation in forty-eight hours. I might easily multiply these examples, which prove not only that total compression may be successful, but that this method, in many instances, will succeed where the other one fails. I do not wish to be understood, however, as being the partisan of either method. One method need not exclude the other; and further experience is necessary to teach us their relative safety and value, and to enable us to select the cases to which they are respectively best adapted. So far as we now know, total compression is the more certain and speedy method, while partial compression is the safer one. In a case of popliteal aneurism, if the symptoms were not threatening, I should proceed cautiously, and resort to total compression only when the other method, after a fair trial, had failed. In the case you have lately seen, however, I feared that the aneurism was about to rupture, and therefore lost no time in resorting to total compression, which caused consolidation on the fifth day. The pressure was continued for another twenty-four hours, as the patient did not complain of it.

Digital compression for the cure of aneurism was first practised by the late Prof. Knight, of New Haven, who in 1848 treated a mulatto, the subject of popliteal aneurism, by this means alone. The tumor became firm at the end of forty hours, and the cure was permanent. Since the period referred to this method has been extensively practised, both at home and abroad; and there seems to be no doubt of its superiority to instrumental compression. It consists simply in the substitution of one or more fingers for the pad, and in the employment of muscular force to determine the degree of pressure. Digital is preferable to instrumental compression, because it can be more accurately made and more readily varied; it is therefore less painful and less liable to cause sloughing. You will often be surprised to learn how slight an amount of pressure will arrest the flow of blood through a large artery, provided the force is properly directed. A number of examples have been recorded where patients have succeeded in curing themselves of popliteal aneurism by digital compression of the femoral artery against the innominate bone. But manual compression is very fatiguing to those who undertake it, and cannot be thoroughly practised without a large number of intelligent assistants. It is because digital compression is so troublesome that we cannot generally hope to avail ourselves of it. In the case before us, manual compression was employed during the daytime, and instrumental compression during the night; and to some of the gentlemen whom I am now addressing

* *London Lancet*, 1872, vol. i. p. 187.
† *London Lancet*, 1874, vol. i. p. 586.

the patient is indebted, in no slight degree, for his recovery.

I am unable to present you with any record of the experience of New York surgeons in the treatment of popliteal aneurism by compression; but, although many cases have been cured by this method, I think I am right in stating that we have hitherto given the preference to the ligature. That the latter is an admirable remedy, no one can deny; and the operation, when skilfully performed, is generally successful. It must be acknowledged, however, that the method of compression, although not absolutely, is yet relatively free from danger; and that, when practicable, it should always be fairly tried by the surgeon before resorting to the knife. Should compression fail, the ligature can then be appiled, without any disadvantage from the previous treatment, provided pains have been taken to avoid making pressure upon the artery in the lower part of Scarpa's space; and I have already explained to you that this spot is not well adapted for the application of the compressing force.

Before quitting this part of our subject I desire to call your attention to certain forms of treatment which are allied both to compression and to the ligature, but which lack the merits of either. I refer to *direct* compression of the afferent artery, after its exposure by dissection. Such compression may be made, either by the finger, by instruments, or by the application of a temporary ligature.

The idea of using a temporary ligature was first conceived by the late Mr. Travers, who, after having performed a number of experiments upon animals, was led to believe that all of the advantages of the ligature might be obtained, and its inconveniences and dangers avoided, by removing it from the vessel a short time after it had been applied, and before the establishment of suppuration. He imagined that the application of a temporary ligature might cause a permanent obliteration of the artery, and that its early removal would determine the union of the wound by primary adhesion. But in both these respects his hopes were disappointed in the only case of popliteal aneurism in which he put this matter to the test. The ligature was applied at the usual place, and was removed after an interval of twenty-seven hours. Pulsation returned in the sac three hours later, and the disease remained unchecked. Six weeks after the first operation the artery was tied in the usual manner, at a little higher point, and the patient was cured. It was evident, therefore, that a ligature applied to the femoral artery could not be removed, after the lapse of so short a period as twenty-seven hours, without the danger of an almost immediate return of the current of blood through the constricted vessel. But, it was further noticed, that the wound from which the ligature had been removed at this early period, not only failed to unite by adhesion, but healed very tardily by granulation. Thus the operation proved a double failure; it did not permanently arrest the current through the artery, nor did it promote the healing of the wound.

In stating his case, Mr. Travers announced his intention to abandon the use of the temporary ligature, and congratulated himself that his trial of it had not been attended with loss of either life or limb. A few years later, Mr. Roberts repeated Mr. Travers's operation and obtained a success.* Notwithstanding this, however, such was the cogency of Mr. Travers's arguments against it, that the operation of temporary ligature fell for a time into disuse. Unluckily it was revived some years ago in this city, and the results were such as to make the operation, I think, unjustifiable in the future. The following is a brief summary of such cases as have attracted my notice:

Case I.—On September 28th, 1868, at St. Luke's Hospital,* Dr. Buck treated a man with popliteal aneurism, by exposing the femoral artery at the seat of election, and twisting around it a silver wire. Two days afterward the wire was removed. The wound suppurated; and on October 19th, secondary hemorrhage occurred, which was controlled by pressure. The aneurismal tumor diminished in size, but did not disappear; and in the following April the patient was readmitted into the hospital, the tumor having attained such formidable dimensions that amputation was deemed necessary. This was performed, and the case terminated fatally.

Case II.—Dr. Markoe,† in a case of popliteal aneurism, passed a fine iron wire around the femoral artery, and secured it by twisting. He removed the wire seventy-two hours afterward, and, as in the case last described, considerable difficulty was encountered in this step of the operation. Gangrene followed, and proved fatal. At the autopsy, the artery was found pervious; but a slender clot, three inches in length, extended on either side of the point of constriction. The operation was performed September 29th, 1868.

Case III.—In the same year, at the New York Hospital,‡ Dr. Peters applied a temporary ligature to the femoral artery for a popliteal aneurism. It consisted of a piece of hempen twine, the ends of which were passed through a double canula. The ligature was removed after an interval of forty-seven hours. Gangrene of the foot followed, and was ascribed partly to a loss of blood which the patient had sustained before he entered the hospital—the aneurism having been opened upon the supposition that it was an abscess. Dr. Peters amputated at the knee-joint, and the patient recovered.

Case IV.—In July, 1869, at St. Luke's Hospital,§ Dr. Hull exposed the femoral artery, and surrounded it with a ligature which was tightened by means of a miniature tourniquet, contrived for this purpose by Dr. Buck. Two days afterward the ligature was with some difficulty removed. Pulsation returned in the tumor on the same day, and compression of the artery was made above the wound. On the next day, arterial hemorrhage occurred, and a ligature was applied on either side of the bleeding point. Gangrene of the limb set in and proved fatal.

Here is a dismal record, which hardly needs any comment. It shows that the use of a temporary ligature, while failing to accomplish its object, is an exceedingly hazardous procedure; and, in the opinion of my friend Dr. Markoe, the great liability to gangrene is probably due to some disturbance of the femoral vein, which occurs at the time when the ligature is removed. Whatever be the cause, however, there is no doubt that, in the light of our present knowledge, the operation should be consigned to oblivion. And I may take occasion here to remark, that the presence of a ligature in a wound is by no means so injurious as many persons imagine. If the ordinary operation is done with care, and the parts are brought into accurate apposition, the suppuration is often hardly perceptible—the wound uniting almost wholly by the first intention. I can recall several instances in which I have tied the femoral artery for aneurism, where only one or two dressings were required before the separa-

* *Med. Chir. Trans.*, vol. xl., p. 100.

* *St. Luke's Hospital Records.*
† *Medical Record*, vol. iv. p. 162.
‡ *Medical Record*, vol. iv, p. 162.
§ *St. Luke's Hospital Records.*

tion of the ligature. The presence of the latter, therefore, is not so objectionable as to warrant any risk to the patient in the endeavor to prematurely remove it.

Temporary acupressure of the femoral artery has been tried lately in three cases in this city.* In one case, the operation cured the disease; in the second, pulsation returned in the aneurism soon after the removal of the needle, and the surgeon resorted to the ligature; and in the third, gangrene supervened, and, I believe, proved fatal. I think it may safely be predicted that this form of operation, which closely resembles that of temporary ligature, will, like the latter, prove to be a step in the wrong direction; and I conceive it my duty to warn you against any such dangerous and uncertain experiments, especially as the disease for which they are undertaken can be controlled by milder means.†

My time will permit me to say but few words in regard to the cure of popliteal aneurism by flexion of the leg; yet the subject is full of interest, and deserving of your careful study. The merit of demonstrating the value of this plan of treatment belongs to Mr. Ernest Hart, of London, who, in 1858, succeeded in curing a patient of popliteal aneurism by simply bending the leg upon the thigh, and confining it in the flexed position by the application of a roller bandage. Consolidation seems to have been effected on the fifth day; but the treatment was continued until the twelfth day, when the patient was allowed to extend the limb, and to go about. Three weeks afterward, the tumor was hardly perceptible. Mr. Hart's example was soon followed by other surgeons, and the flexion method has ever since retained its place as a simple and valuable surgical resource. Like compression, flexion is uncertain in its results, and sometimes fails after thorough trial. Several cases, in which it was tried without success, you will find reported in THE MEDICAL RECORD. In 1864, at the New York Hospital, Prof. Markoe treated a colored man, aged sixty-two, for a recurrent popliteal aneurism—the ligature having been employed with success ten years previously. Flexion to a right angle, which arrested pulsation, was kept up for seventeen days without benefit; and at the end of this time Dr. Markoe tied the femoral artery in Hunter's canal, and the patient was cured.

In THE MEDICAL RECORD for 1866 two cases are reported as having been treated at the same hospital by the flexion method, but with a negative result. In one of these cases flexion was continued for seven, and in the other for fourteen days. The treatment was stopped on account of pain; and the artery was tied by Dr. Buck, the attending surgeon. Both patients were cured by the ligature.

Contrasting with these cases, in which a fair trial of the flexion method proved unavailing, are those in which this treatment causes a rapid consolidation of the aneurism. In the case of the patient now before you, coagulation doubtless took place in less than twenty-four hours; and in one reported by Pemberton, of Birmingham, it occurred in less than twelve hours. The most remarkable example of this kind, however, that has come to my knowledge, is one quite recently recorded in the London *Lancet*.‡ The patient was an inmate of the Leicester Infirmary, and was cured by flexion in six hours. It is further stated that he had previously been cured of a popliteal aneurism, affecting the opposite limb, by flexion lasting only seven hours.

Sometimes this plan succeeds when other plans fail. About six years ago I treated a man with popliteal aneurism, at the Bellevue Hospital, by tying the femoral artery in the usual manner. The patient recovered from the operation, and the aneurism diminished in size. Recurrent pulsation was soon detected, however, and in the following year the man entered the Strangers' Hospital, where he was treated by simultaneous flexion of the leg and the thigh. The contents of the aneurism soon consolidated, and a permanent cure was effected—the patient having remained entirely well up to the present date. A case analogous to this one has been reported by Spence, of Edinburgh. The ligature of the artery having failed to cure, compression of the common femoral was tried for no less than five months without success. Ligature of the artery in Hunter's canal was then proposed; but—the patient refusing to submit to the operation—flexion was resorted to, and accomplished a cure at the end of a month.

The flexion method, although tolerably safe, is not quite free from risk. In a case lately treated in St. Thomas's Hospital,* London, flexion during four days caused gangrene of the foot—the gangrene extending to the knee on the following day. The surgeon, Mr. Wagstaffe, performed amputation at the lower third of the thigh, and the patient recovered. It is stated that the circulation was completely arrested only during the first two hours of flexion.

The method is exceedingly simple, and hardly needs to be described. A roller bandage having been applied from the foot to the knee, the leg should be flexed until pulsation of the aneurism ceases. The roller must then be carried around the thigh and leg, to maintain the bent position. Sometimes acute flexion is required to produce the desired result, and, in this event, the patient is apt to suffer from pain, which may prove intolerable. In other cases, as in the one before you, the treatment is easily borne, and produces little or no inconvenience. In many instances the patient has been permitted to get up and walk about during the treatment, with the aid of a pair of crutches. It is preferable, I think, to confine him to the bed; and, if a water-mattress can be provided, it will add greatly to his comfort.

It is not easy to offer a satisfactory explanation of the manner in which an aneurism is cured by flexion; and it is probable, I think, that the *modus operandi* varies in different cases. Of course, the current of blood through the sac must be retarded; but the question that arises is, How is this retardation brought about? By some it is thought that the pressure to which the sac is subjected is the main element of cure, and that, consequently, the flexion method resembles that of direct compression, which I described to you at the beginning of the lecture. This mode of explanation does not commend itself to my judgment, and would fail, I think, to account for the large number of cures which have taken place. Another theory is, that the pressure made upon the sac by the flexion of the leg is—especially if the former already contains coagula—communicated to the artery above the sac, and that thus the circulation through the latter is arrested. This explanation will apply, perhaps, to those cases in which the aneurism has attained a considerable size, or in which flexion is carried to an extreme degree. But it would not apply to the case of the patient now in the hospital, whose aneurism was of

* *St. Luke's Hospital Records.*

† In the New York MEDICAL RECORD of April 26th, 1871, a case of popliteal aneurism is reported as having been cured by the application of Dr. Spier's "artery constrictor" to the femoral artery. Very slight suppuration occurred, and the wound healed in fifteen days. A perusal of this report has not led me to change the views above expressed.

‡ *London Lancet*, 1874, vol. i. p. 765.

* *Med. Times and Gazette*, 1874, vol. – p. 207.

moderate size, and situated high up in the popliteal region. In this instance, I think, the lower edge of the aneurism was, in the act of flexion, forced against the artery on the distal side of the sac, and an effect was produced similar to that which would follow the application of a distal ligature. At all events, the main body of the sac was not compressed; and certainly no pressure could have been exerted upon the afferent artery, so as to arrest pulsation below. That the explanation just offered is probable, will appear from the fact that extreme flexion of the leg will, even in healthy subjects, either greatly retard or else arrest the flow of blood through the main artery. In my own person I have ascertained that extreme flexion of the leg arrests the pulsation of the anterior and the posterior tibial arteries; and that a corresponding movement of the forearm arrests that of the radial and the ulnar. In the case of the patient cured by flexion at the Strangers' Hospital, I mentioned, as you may remember, that he was treated by simultaneous flexion of the leg and of the thigh. Now, this modification of the flexion method was the result of experience; for it was ascertained that although simple flexion of the leg, when carried as far as the patient would bear it, did not stop, but only diminished the pulsation of the aneurism, the pulsation ceased entirely when rectangular flexion was made, both of the leg and the thigh. It was further observed that the same result could be produced, even when the leg was extended, by making extreme flexion of the thigh. In most instances, as I imagine, a cure is effected by a combination of the causes I have mentioned, and not by any one of them alone.

To sum up, then, both the compression and the flexion methods of treating popliteal aneurism have yielded excellent results, and are, perhaps, capable of still further development. They are to be tried, in suitable cases, as a substitute for the ligature; and, in the event of failure, the latter can be resorted to with the usual chances of success.

TREATMENT OF CHANCRE.

SYNOPSIS OF A LECTURE DELIVERED

By T. F. MAURY, M.D.,

LECTURER UPON VENEREAL DISEASES IN JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

(Phonographically reported for THE MEDICAL RECORD.)

GENTLEMEN: The treatment of chancre is divided into local and constitutional.

Constitutional treatment is *invariably* necessary when the chancre is *hard*, but is not necessarily instituted when the chancre is soft.

Local Treatment.—Local treatment should be adopted for *all suspicious* sores in and about the genitals, and the *invariable* line of topical treatment is *escharotic*. The agents by preference to be employed for that purpose are acid nitrate of mercury, nitric acid, muriatic acid, and chloride of zinc. If treatment of chancre can be instituted within five days after exposure, the chances are very good that the patient may escape from constitutional symptoms; but after five days have elapsed it is not safe to predict a perfect cure under any circumstances whatever. By way of illustration, if a patient should present himself with a chancre eight or ten days after exposure, local application should be made as soon as possible in the way of cauterization, and constitutional treatment at once adopted if the chancre is hard; but guarantee of perfect cure cannot be made with safety.

In such cases it becomes necessary to first determine whether the chancre has been previously cauterized or not, for the inflammatory action induced by the cautery may have produced an induration which has changed a soft sore into one closely resembling the true *hard* chancre. Cauterization can be too frequently resorted to. You must be governed in the application of caustics, from time to time, by the effects produced. It not unfrequently happens that an inflammatory chancre is produced by repeated cauterization.

After the cautery has been applied, the sore will require some local dressing. For this purpose citrine ointment, diluted eight times with simple cerate or benzoated lard, is perhaps as elegant a dressing as can be employed for either the hard or soft chancre. A twenty-grain solution of nitrate of silver is sometimes employed. Black wash is a most excellent dressing. Labarraque's solution is very serviceable in many cases. A very cleanly and agreeable dressing consists of equal parts of aromatic wine and glycerine. The wine contains some twenty or more ingredients, all of which are useful in the treatment of this class of sores. Tannic acid ʒ i. and glycerine ʒ i. also forms an excellent dressing.

Whatever dressing may be employed it is important to keep in mind the fact that the ulceration remaining after the cauterization should be treated in the same manner as an ordinary ulceration, and one of the most essential elements is *thorough and perfect cleanliness*. To wrap these sores up with a cloth saturated with some form of ointment, as is sometimes seen, is exceedingly pernicious; and this is especially true with regard to the soft sore, for the reason that there is a very great liability of transmitting the poison to surrounding parts. This fact is particularly to be borne in mind in the treatment of females. Always keep the edges of the sores isolated. To this end the proper method of carrying out your local treatment is to dress each sore *separately*. Cover each individual sore with a separate piece of plain scraped lint wet with the dressing employed. The lint absorbs all discharge from the sore, and it should be removed as often as may be necessary to insure perfect cleanliness and comfort. Whenever the discharge of pus is abundant, it will be necessary to change the dressing quite often.

These directions are not so specially important in the local treatment of the hard chancre, although they can be observed with advantage even there.

When the sore is under the prepuce a liquid dressing is preferable to an unguent, especially in the summer season.

These, gentlemen, are some of the essentials, or if you choose you may call them "niceties," in the successful management of this class of diseases.

Constitutional Treatment.—There is one condition in which the administration of mercury may be justifiable in the treatment of *soft* chancre. This is the condition which is present when you have utterly failed to restore the parts to a healthy condition by local applications. Under such circumstances the administration of mercury may be resorted to with good results. The mercury is given simply for the purpose of assisting the healing process. It is administered for the same purpose that it is sometimes administered to assist in healing an indolent ulcer upon some other part of the body—it is because of the so-called power which the remedy has to stimulate the vessels to remove the material that has been deposited in and about the sore. Salivation and purgation are not to be resorted

to, but it is a tonic and alterative influence which is desired, and for that purpose mercury seems to exert the best influence of any drug we at present possess.

When the chancre is *hard*, constitutional treatment by the use of mercury is *invariably* to be adopted. Under no circumstances whatever should you endeavor to heal the sore and cure the patient by simply using ordinary antiphlogistic or ordinary topical means. The sheet-anchor is constitutional treatment, and constitutional treatment by the judicious use of mercury until its effects are produced primarily upon the sore, and secondarily upon the constitution, as evidenced by tenderness of the gums.

Never administer iodide of potassium in the treatment of primary syphilis. The constitutional treatment to be adopted for the soft chancre consists chiefly in regulating the diet and giving proper attention to the alimentary tract. If the grade of inflammatory action is high, as evidenced by the condition of the pulse, heat of skin, and general constitutional disturbance, it may be necessary to modify such action by the administration of aconite, or antimonial mixtures, or saline mixtures, or antimonial and saline mixtures combined. An occasional laxative is usually serviceable, even though no marked constitutional symptoms are present.

The general outline of constitutional treatment for the soft chancre is embraced in abstaining from stimulants and avoiding all agents which have a tendency to excite inflammatory action.

In general terms, then, the treatment of chancre may be summarized as follows: For the *hard* chancre, *invariably* cauterization and the internal use of mercury; the mercury being administered for the purpose of establishing resolution of the sore, and not solely for its constitutional effects. For the *soft* chancre, *invariably* cauterization, and the adoption of a constitutional treatment chiefly embraced in a regulation of the diet, habits, and general constitutional condition. Mercury is to be resorted to *only in exceptional cases.*

In both instances cauterization of the sore is to be repeated or not according to the condition of the sore when it first comes under observation.

In both instances the local treatment which should follow cauterization is such as may be employed in the treatment of an ordinary ulcer.

These rules closely observed will give you the key to successful treatment of the primary, secondary, and tertiary forms of syphilis. We will now take up the consideration of the treatment of special forms of chancre. First, of the

Inflammatory Chancre.—The inflammatory chancre is a soft chancre attended with a great degree of inflammatory action. It has for its causes position, confinement of the poison beneath a long prepuce, constriction, want of cleanliness and attention, excessive cauterization, etc.

In the inflammatory chancre there is present a high degree of inflammatory action, which must be abated before any further treatment is adopted. *Never apply the cautery to an inflamed chancre until the inflammatory action has been subdued.*

The inflammatory action is to be subdued by the use of ordinary antiphlogistic means, such as purgatives, diaphoretics, alteratives, emollient poultices, anodyne and saturnine lotions; and, when all inflammatory action has subsided, apply the caustic. It is always well, as a matter of protection to yourselves, to state to the patient, if he has had the sore for eight or ten days or more, that the value of the caustic application has been very much diminished by the delay.

PHAGEDENIC CHANCRE.

In the phagedenic sore we have an entirely different condition from that which is present in the inflammatory sore.

Phagedæna in the soft tissues corresponds to necrosis in the osseous structures.

It has for its causes: a low condition of system; a scorbutic condition; the same conditions which give rise to inflammatory chancre may give rise to the phagedenic sore, the one being the first step of the other.

It is simply a mortification of the soft parts. *The phagedenic chancre occurs only as the result of neglect.* The treatment consists in the prompt, repeated, active, but judicious application of caustics. Control the phagedæna by cutting off all the dead tissues. There is no time for parley or consultation of books; for within a few hours, perhaps twelve or twenty-four, the penis is gone. The strongest caustic possible must be employed, and, in many cases, time can be saved by removing the phagedenic tissues with the scissors or knife, and then applying the caustic.

The best caustic, probably, which can be employed in these cases is the acid-nitrate of mercury.

Cut down until, when the slough comes away, a healthy surface presents itself. For farther topical application in these cases, there is none more excellent than the ordinary cracker poultice and tr. opium. Take the common water-crackers, pound or roll them fine, and mix with boiling water, and add tr. opii as may be necessary. Starch, slippery-elm, or bread-and-milk poultices may be used; and, in brief, all agents which will control inflammatory action. At first, you should lose entire sight of the specific nature of the disease, and treat the local condition. The treatment in such cases must be energetic and undelayed.

MASKED CHANCRE.

Under this head belong the so-called urethral chancres, etc.; the term "*masked*" indicating what is understood by masked chancre. It is a common subterfuge employed by medical men, when constitutional symptoms become developed in consequence of errors in diagnosis, improper treatment, or neglect in treatment instituted for the cure of the primary lesion. For instance, a patient presents himself or herself with a suspicious-looking sore about or upon the genitals; it may be cauterized even; but subsequently constitutional symptoms are developed, and, when the doctor is asked for an explanation, he consoles the patient by saying that he had a "masked chancre." I believe, however, that it is a thing almost unknown.

It is true that a chancre may occur in the urethra, as far back as the fossa navicularis; it may occur as the result of improper use of instruments, even deeper in the urethra than this; but ordinarily, and as a rule, I believe that chancre never occurs in the deeper portions of the urethra, and that it is only in very exceptional instances that it occurs as far back as the fossa navicularis. The treatment must be according to the character of the chancre.

MIXED CHANCRE.

This is simply a mixture of the two kinds of chancre, the *hard* and the *soft;* that is, a soft and a hard chancre existing upon the genitals at the same time. It is now a well-established fact that this may occur. It is quite probable that it is just here that all the trouble has existed with regard to the nature of syphilitic poison. The treatment consists in cauterization, and the constitutional treatment adapted to the two conditions. Cauterization is important, for it may insure a prevention or modification of constitutional symptoms.

CHANCRES OF THE ANUS AND RECTUM.

These are extremely common, especially in the female. Uncleanliness is the great cause. Intercourse in the rectum is a very common cause. Chancres in the mouth and other parts of the body may be developed in the same manner. When found they are to be treated in accordance with the general rules already laid down.

Original Communications.

PERITYPHLITIS; ABSCESS; OPERATION ON EIGHTH DAY; RECOVERY.

By SAMUEL B. WARD, M.D.,

ONE OF THE SURGEONS TO THE PRESBYTERIAN HOSPITAL, ETC.

J. B., age 18 years, single. Nativity, United States. Occupation, driver.

May 15*th*, 1872. Was first called to see him, and found that on the 9th instant (six days previous) he had returned from work not feeling well; feverish, bowels constipated, slight nausea, and pain and swelling in right iliac fossa. His mother, a professional nurse, had given him something to move his bowels, and had applied a poultice over the swelling. From the 10th to the 14th he gradually improved. During the day of the 15th he became rapidly worse, and I found him in the evening with pulse of 106, temp. 103.6°, skin hot and dry, and tongue thickly coated in the middle, and red and cracked at the edges. In the right iliac fossa was a tumor larger than a hen's egg, hard, attached, and very tender, but not painful while he lay quiet. The rest of the abdomen appeared natural.

The diagnosis was made of impending abscess in and about the appendix vermiformis. As the bowels had not moved for several days, and the patient complained a good deal on that account, a gentle laxative was ordered, with perfect rest in bed, and hot poultices.

16*th*. Dr. J. W. Wright saw the case with me, and confirmed the diagnosis. Pulse, 96; temp., 103.3°. Tongue better, and feels better every way. Thought that we detected slight fluctuation.

17*th*. Drs. D. M. Stimson and Wright saw the patient in consultation with me. There being no change in the symptoms, and all agreeing as to the diagnosis and proper course of treatment, I proceeded—ether having been administered by my student, Mr. E. L. Partridge—to open the abscess by an operation very similar to that for ligating the external iliac artery. The incision commenced about three-fourths of an inch internal to, and a little above, the anterior superior spinous process of the ilium, and curved downwards and inwards nearly parallel to Poupart's ligament, terminating at a point nearly over the external iliac artery. The skin incision being so far external and so low down, I was obliged, in order to reach the tumor, to carry the division of the deeper tissues obliquely upward and inward, and this caused some little difficulty in completing the operation. When we reached the peritoneum the tumor was distinctly felt; but the peritoneum did not appear to be adherent to its surface, and we could not satisfy ourselves as to any fluctuation being perceptible. For these reasons it was considered expedient to stuff the wound with lint and leave it for the present. Poultices reapplied. Patient bore the operation perfectly well.

18*th*. Patient slept only about two hours last night, but is much improved. Early this morning, about sixteen hours after the operation, there escaped from the bottom of the wound about two ounces of pus, having a dirty brown color and fecal odor, but in which no foreign body was to be found. Careful probing showed the cavity of the abscess to measure about one inch by two. At 11 A. M. pulse 69; temp. 99.2°. Considerable tenderness in region of wound; swelling less than yesterday.

19*th*. Much better; pulse 66; temp. 99°. Wound healthy, not yet suppurating. Abscess discharged about two ounces in last twenty-four hours.

20*th*. Suppuration established in the wound, so as to render it impossible to say how much of the pus discharges from it, and how much from the abscess. Odor much less marked than yesterday. Wound dressed with lint and carbolic acid, and syringed out with an aqueous solution of carbolic acid every day.

27*th*. Patient has done uninteruptedly well since last date, and wound has filled up from the bottom until it is only about half its original size and depth. Bowels moved on the 23d for the first time; no measures having been adopted either to promote or retard their action. They have moved every day since. Appetite very good, spirits excellent, sleeps well. A record of the temperature and pulse shows nothing of interest. Since the operation the former has not exceeded 100.2°, nor the latter 80.

June 14*th*. Patient discharged to-day cured. Wound entirely healed, and general health as good as could be expected after so long confinement to the house.

September 26*th*, 1874. Examined the patient to-day—two years and four months after the operation—and find the scar resulting from the operation to be soft, pliable, non-adherent, and perfect in every respect. It has changed its position however, so as to lie below Poupart's ligament. That portion of the abdominal wall incised in the operation seems to be as strong as any other, and the patient states that he has never had any kind of trouble that could be referred to the operation.

Dr. Willard Parker deserves the credit of having called our attention to the diagnosis of abscesses in and around the appendix vermiformis, and also of recommending early operation in suitable cases, in an article which may be found at p. 25 of vol. ii. of the NEW YORK MEDICAL RECORD.

A few weeks ago Dr. Gurdon Buck read a paper on this subject before the New York Academy of Medicine, founded on ten cases which he had collected, and from which it would appear that an English surgeon, Mr. Hancock, as long ago as 1848, recommended the same operation and reported a case. This paper seems to have escaped the notice of all subsequent writers on the subject.

OFFICERS ELECTED BY THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK FOR THE ENSUING YEAR.—*President*, H. B. Sands; *Vice-President*, Thomas A. Emmet; *Recording Secretary*, A. E. M. Purdy; *Corresponding Secretary*, F. A. Castle; *Treasurer*, F. P. Farnham; *Censors*, Ellsworth Eliot, J. E. Janvrin, A. Jacobi, H. T. Hanks, J. C. Peters; *Delegates to State Medical Society* (to serve four years): John C. Dalton, A. E. M. Purdy, J. E. Janvrin, G. M. Smith, H. B. Sands, E. Krackowizer, F. A. Castle, A. H. Buck, A. B. Crosby, A. Jacobi, T. R. Pooley, C. M. Allin, F. P. Foster, H. P. Farnham, J. H. Emerson, L. de F. Woodruf, H. G. Piffard, H. T. Hanks, C. W. Packard, G. Bayles, Mary Putnam Jacobi.

Progress of Medical Science.

HEMORRHAGIC MALARIAL FEVER.—Dr. W. A. B. Norcom, in an address as President of the Medical Society of North Carolina (Transactions of the Twenty-first Annual Meeting), gave a very valuable and practical description of this form of disease, which is not well understood in this section of the country. Alluding to the various views entertained, he expressed his opinion that the disease did not, as was claimed by some, appear for the first time a few years ago, but that it had long been recognized. The clinical history of the fever is very well given by the author. It either begins *de novo*, or as the result of long or frequent attacks of intermittent fever. In its whole course it seems to resemble what we see here as severe forms of remittent fever, to which there are such complications as hemorrhages of severe form from the nose, mouth, stomach, bowels, kidneys, and womb. It begins usually, but not invariably, with a chill of about two hours' duration, attended with intense internal heat, which causes the patient to demand cooling drinks. Almost coincidently a severe nausea is experienced, which leads to vomiting, at first of food, then bile, and then, in bad cases, of blood—the latter sometimes resembling the black vomit. There is a sighing respiration, insomnia, great restlessness, anxiety, and an almost unquenchable thirst. The pulse rarely exceeds 100, but after severe hemorrhages it goes up to 150, and is very feeble. The temperature ranges between the normal point and 105° Fahr. The skin assumes a yellowish, even a bronze color, and the eyes become sunken. The tongue does not become very much coated. The bowels are usually costive. In one instance blindness was observed by Dr. Norcom, which he thinks was due to hemorrhage of the retinal vessels. This symptom is very rare. Remissions do not occur, or at least cannot be noticed. The urine may simply contain large quantities of degenerated red-corpuscles, or in severe cases blood and albumen. Urea and the mineral acids are not increased, but are retained in the blood, thus poisoning it. The hemorrhages occur most frequently from the kidneys, next in order of frequency from the nose, and rarely from the other sources. The duration is from four to twelve days. The fact of the hemorrhage from the kidneys leads to the disease being termed in some quarters malarial hæmaturia. Pathological anatomy shows defibrinization of the blood and destruction of the red globules, enlargement and softening of the spleen, enlargement and bronzing of the liver, softening and injection of the alimentary canal. In the hæmaturic form the kidneys are enlarged and congested, and there is a casting off of the epithelial lining of the uriniferous tubes. The greater or less implication of the kidneys causes the proportionate intensity of the uræmic symptoms. Under favorable circumstances in a few days the fever subsides, the nausea ceases, and the patient becomes convalescent. In severe forms he dies, either conscious and from asthenia, or unconscious from uræmia; heart clot and cholesteræmia may also cause death. The directions for treatment, as given by Dr. Norcom, are noticeable for their valuable practical character. He shows the necessity of active early interference. He advises the usual warming applications for the cold stage; hot, stimulating drinks being given even if rejected; morphine, in good doses, is to be injected under the skin. This has a tendency to control the vomiting, which, being relieved, ten grains of quinine are to be administered, if rejected to be given hypodermically. This dose is to be repeated every hour until four or six doses are given; at this time another injection of morphia is necessary. During this time stimulants and meat broths are to be given, and cooling drinks are allowed. Hemorrhagic complications are to be combated with astringents, and he suggests ergotine hypodermically. Enemas may be necessary for constipation. The continuance of the administration of the quinine and morphine depends on the progress of the case. By this treatment Norcom claims that the mortality, which is usually set down as 50 per cent., is rendered much less. The paper, which also treats of causation and prophylaxis, is a valuable contribution to literature, and gives evidence of extended study and clinical perspicuity of the author.

RELIEF OF INTESTINAL OBSTRUCTION BY INFLATION OF THE BOWELS WITH AIR.—Though a number of cases have recently been reported in which air has been successfully used to overcome intestinal obstruction, it is not claimed that this treatment is new, for it is well known that Hippocrates recommended it for intussusception and obstructive difficulties over two thousand years ago. Rokitansky made some experiments in this direction by producing volvulus artificially, and he found that air introduced per rectum would restore the parts to their proper position. Osborne published twenty-eight cases of obstruction, in which seven recoveries took place, and three of them were ascribed to the inflation of air. Since then other cases have been reported. The treatment consists in placing the patient in the knee-elbow position, and then injecting air per rectum with an ordinary syringe or pump, of which the Davidson apparatus is one of the best. Sufficient air must be introduced to distend the bowels completely, and give the patient a slight feeling of uneasiness. The symptoms are said to yield rapidly. Dr. Boettger, of Dessau, has added three successful cases to the list, two of which are good tests of the method advocated. One was a young man, twenty-four years of age, who was suffering from a strangulated scrotal hernia, and refused to allow any operation to be performed on him. Efforts were made from time to time to replace the gut, but they were ineffectual, and other remedies that were tried were equally unsuccessful. On the fifth day it was decided, as a *dernier ressort*, to try inflation of the bowels with air. The operation was performed in the usual way. Shortly afterwards offensive gases began to be discharged, and they were followed by thin fæces. It was then observed that the hernial tumor had disappeared. The whole time occupied was not over half an hour. Eight days later the patient was so well that he had resumed his work. In another case a woman, forty years of age, was found to have had a strangulated femoral hernia for three days. She had suffered from the hernia for years, but had always succeeded in replacing it when it prolapsed. When the patient was first seen she was suffering from nausea. An attempt was then made to replace the hernia by taxis, but it failed. The next morning a second attempt was made with a like result. On the following afternoon inflation with air was resorted to. Some thin passages, possibly from the intestine below the obstruction, were evacuated, but the symptoms were somewhat relieved. For several days the same procedure was adopted, and the tumor diminished gradually in size. About this time a dose of oil was given, and the patient had copious fecal discharges. A small tumor still remained, which seemed to be due to the adhesion of some of the abdominal contents to the wall of the sac, while the intestine had returned to the abdominal cavity. The patient continued to do

well from this date. In the third case there was obstinate constipation for eight days, which was presumed to be due to some internal obstruction of the intestines. It was relieved by the same treatment.—*Memorabilien*, 5, 1874.

Malformations of the Lungs.—Klebs says that we meet with the following anomalies of the lungs: 1. Absence of both lungs. 2. Complete development of one lung and rudimentary development of the other. 3. Rudimentary development of both lungs. A lung arrested in its development shows no signs of lobes, and may possibly be unconnected with the bronchi. A further anomaly is the abnormal insertion of such a rudimentary lung. He alludes to a specimen which he had seen, where the right lung was represented by a body not larger than a hazel-nut, and was attached to the œsophagus, just above the diaphragm, and proved on careful examination to be made up of lung tissue. Generally a rudimentary lung is inserted like the normal lung. The results of his observations had been that where a single lung was deficient it was the right one, in eight out of ten cases, and the pleural cavity was then occupied, on the right side, by the heart and a certain amount of connective tissue.

The causes that produce such deficiencies may be due to a mechanical arrest of growth. The anterior end of the body, during the first four weeks of fœtal life, is turned from right to left by the development of the amnion. Consequently the tension of the amniotic membrane will exert its influence on the organs of the right side anteriorly, and will retard their development. The absence of the kidney, in the same instances, on the opposite side, is explained on the same hypothesis; for while the anterior end is turned to the left, the posterior end is turned to the right, and there must be tension of the parts on the left side posteriorly, which accounts for the atrophy or absence of the kidney.—*Aerztl. Corr.-Blatt*, 13, 1874.

Death from Rupture of a Caseous Bronchial Gland.—Kjerner reports the sudden death of a boy, seven years of age, who was not known to have any organic disease, and had merely suffered from a hacking cough. Without previous warning he was attacked with vomiting, followed by a violent paroxysm of coughing and a feeling of extreme pain in the chest. In a short time his face became cyanotic, and he died with symptoms of suffocation. At the post-mortem examination the trachea was found filled with an ashy, white mass, which extended downwards below the bifurcation. On the posterior wall of the right bronchus an opening about five millimetres in diameter was found; it led directly into the cavity formed by the cheesy degeneration of a bronchial gland, which rested on the bronchus, partly surrounding it. The material found in the trachea corresponded exactly with the cheesy contents of the diseased gland. The other bronchial glands were in a similar state of degeneration. The lungs were hyperæmic, but the larynx and heart were normal.—*Hygeia and Nord. Med. Ark.*, 2, 1874.

Typhoid Fever propagated by Milk.—In April, 1872, typhoid fever broke out in the village of Armley, near Leeds. The disease continued to prevail until the following September, and there were 107 cases in 68 houses. Sometimes only a single case occurred in a house, at other times several. Persons of all ages and of all classes were attacked, and the males and females in about equal proportions. Children, however, were more frequently the victims than adults. It was thought that the cause might be defective drainage in the village; but there seemed to be no particular reason why these houses should be any worse in this respect than the others. It was suggested that the milk might be the medium of infection, as, at one time, nearly all the families that were attacked obtained their supply of milk from the same dealer, and he himself had the disease in May. It was found on inquiry that of the 68 families, 51 bought their milk of this one man. He supplied milk to 132 houses out of 449 in the village, and about 37 per cent. of these families had typhoid fever, while of the remaining 317 houses, who were supplied by 18 other dealers, 17, or about 5 per cent. only were attacked. The disease also occurred later in the 17 instances, and the causes may have been secondary, as may be the case in any such epidemic. When attention was directed to the milk, it was found that the excreta of the milk-man, who had been sick, were deposited in a vault near the well, and during the rainy weather these foul matters found their way into the well, from which water was taken to dilute the cows' milk. On the 10th of July the use of the well was prohibited, and on the 27th the epidemic suddenly abated.—*The Lancet.—Rundschau*, August, 1874.

The Spirilla in the Blood of Relapsing-fever Patients.—The minute parasitic organisms that Obermeier found so abundant in the blood during relapsing fever, and which he supposed to be peculiar to the disease, have been observed again by Birch-Hirschfeld, in a typical case of the same disease. The blood was examined microscopically during the second febrile exacerbation, and when the temperature in the axilla stood at 103° Fahr. Every field of the microscope showed from three to eight of these organisms, whose length was from five to ten times the diameter of a red-blood globule; they appeared like delicate threads, and exhibited active spiral movements, as a rule, but occasionally were quite motionless, appearing then to be nearly or quite linear in form; often they would remain at rest for a considerable time, and would then suddenly assume the most active spiral motions. During the continuance of the fever the spirilla were always found, but they decreased in numbers during its subsidence. One of the chief points brought out by this case was, that two days after the end of the fever, and when the temperature had fallen to the normal, or even below, spirilla were still found in the blood, a fact which is opposed to the statements of previous writers, who assert that the spirilla disappear with the last vestiges of the fever. The urine was repeatedly examined, but no spirilla were found, nor could any be produced by cultivation in Pasteur's fluid. After three days had elapsed, there were numerous bacteria, but no spirilla.—*Deutsches Arch. f. klin. Med., Allg. Med. Central Ztg.*, 75, 1874.

Periosteal Flaps in Amputations.—Tizzoni believes that the results of numerous operations on animals and occasional examinations of the stumps of patients, justify him in making the following statements as to the advantage of periosteal flaps:—

1. The operation is easily performed. At the present day, when pain and blood is spared the patient, it is a matter of small consequence if a little more time is consumed than usual. 2. The periosteal flaps retract considerably, but equally and without wrinkles. 3. These flaps will remain spread over the cut surface of the bone. 4. In twenty-four hours there will be a firm adhesion between the medulla and the flaps. Later, they consolidate with the bone. This early adhesion is of the greatest practical significance. It protects the medulla from the influence of the pus that may possibly form about the end of the bone.—*Riv. Clin. d. Bologna, Allg. Med. Central. Ztg.*, 74, 1874.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, November 2, 1874.

THE USE OF OUR CODE OF ETHICS.

Our relations to each other and to the public are of such a nature as to render it imperative that some rules should exist for governing our actions. It is certainly a reflection upon our moral perceptions as individuals, and our obligations to each other, that there should be any code of ethics; but the longer we live, and the more we become acquainted with the motives and actions of medical men, the more are we impressed with the necessity for its existence. A strictly honorable physician needs no rules to govern his conduct towards his professional brethren. His standard of right and justice is high enough to make it impossible for him to do an intentional wrong to his associates. He has the same pride in being considered a high-toned, honest medical man as he has in being known as a gentleman. In fact, he is ever straining a point to leave nothing undone that would entitle him to the honor of being considered as such. His sensitiveness upon this point, in view of the interests at stake with him, makes a desire to please, to act justly and honorably with all, almost a morbid propensity. Such a man no more requires a code of ethics than does the gentleman require a set of rules which should govern his conversation and action in the drawing-room, or guide his conduct at a dinner party. If all of our medical brethren could be numbered with this class, it would certainly be a cause for congratulation. That such, however, is not the case, is a mortifying and melancholy fact.

There are two classes of medical men for which the code of ethics is of special use. First, for such as are deficient in their education as gentlemen, and who are in need of instruction; and secondly, for those who know better, but who persist in doing wrong intentionally and defiantly. With the first of these classes there is usually very little trouble, for when once they are impressed with the importance of behaving properly they are anxious to supply deficiencies in their earlier education, and seldom are, as far as intentions go at least, subjects for discipline. Although they may not understand the reasons for their action, or appreciate the spirit of the law, they are nevertheless ready to obey its letter, and, like ordinary men of their class, become law-abiding citizens. They thus benefit themselves at the same time that they benefit the communities of which they are part.

The class which, knowing better, yet is constantly and intentionally transgressing the law, is, in the medical profession, very large. For the government of this class it is for the benefit and credit of medicine that we have a code, that we have a standard by which in some way or other all their wrong-doings, quibbling, dodging, and cunning can be judged. The intentional transgressors are not confined by any means to the lower walks of professional life, but, on the contrary, are to be found among men of position and influence in medical circles. It would seem that their very position grants them immunity from discipline. So much does this appear to be the case, that it is often asserted that the code was only made for the government of the little ones, to impress them with the privileges of those who have gained position. Very few, it is true, of this latter class are ever brought to trial; but that is an argument in favor of strict justice. One would suppose, judging from the medical men who are tried for wrong-doing—for transgressions against the code—that none but obscure individuals commit any sin. We are not willing to believe this, and we imagine that the profession in general are of the same way of thinking. How often is a certain prominent man pointed to as an example of wrong-doing, and his actions quoted in extenuation of similar acts in a lesser light. The trouble is, however, that committees of ethics and individuals are not so ready to enforce discipline upon a great man as they are to bring to account a small one. If the latter is expelled from a society, or virtually banished from the profession in consequence of an adverse judgment, no particular interests but his own suffer, and we quiet our consciences by imagining that we have vindicated the law. But if we have laws, and wish them to be respected, we should be ready to understand that they were made for the great as well as the small.

We contend that the men who hold positions are, by virtue of their example, really more responsible for violations of the code than their less fortunate associates. We are not of those who think that because a man is a professor, a president of a college, an officer of a society, that he is incapable of doing a wrong act; in fact we, in common with the majority of the rank and file, know that such a state of things comes very often within the range of possibility. Such acts, in comparison with those of lesser men, are tenfold

PHAGEDENA.

The case was one of sloughing upon the foot, dependent upon syphilis. Bristow's solution of bromine was employed in this case to destroy the phagedena, and the applications followed by yeast and charcoal poultice. The solution is made as follows:

℞. Bromine..... ʒi.
Bromide of potassium..... ℈ii.
Aquæ..... ʒii.
M.

It is claimed for this solution that the appetite is almost invariably improved within twelve or twenty-four hours after its application to the affected part. This was said to be the peculiar effect produced by the application.

REMOVAL OF BRACHIAL PLEXUS.

The patient was a man 71 years of age, who had a painful neuroma of the skin for ten years. Dr. Maury had dissected and removed the entire brachial plexus of nerves, and the operation was attended with complete recovery so far as pain was concerned. Motion and sensation were lost. A more perfect report of the case can be found in the *Am. Journal of Med. Science* for Oct. 1873.

SPRAINS.

Foot bath, hot as can be borne, for half an hour, followed immediately by free rubbing with liniment composed of soap liniment with a small quantity of aqua ammonia and oil of rosemary, and then a snugly applied bandage.

ACUTE SYNOVITIS.

Treatment, general antiphlogistic, associated with local counter-irritation in the form of tr. iodine or blisters.

CHRONIC SYNOVITIS.

The aspirator has been used somewhat frequently, and with very good results.

ESMARCH'S APPARATUS

The tourniquet is preferred to the rubber tubing, for the reason that all danger of the tubing getting loose is avoided, and the tourniquet can be easily loosened to facilitate finding the arteries for purposes of ligation.

FRACTURE OF THE FOREARM AND COLLES FRACTURE.

For the treatment of these fractures Bond's splint and Nélaton's pistol-shaped splint are the ones chiefly employed.

FRACTURE OF THIGH.

The wire-gauze splint of Dr. Nathan R. Smith is usually used.

FRACTURE OF THE LEG.

The book-back splint is the favorite.

The idea is to nearly enclose the limb in some unyielding material, and yet leave the posterior portion sufficiently flexible to permit of easy removal. This can be easily accomplished by reinforcing a light plaster dressing with lateral strips of cloth, pasteboard, leaving the back of the splint more or less flexible.

"Permanent," or "immobile," or "mobile immobile" dressings are but little employed in the treatment of fractures in this hospital.

ACUTE ARTICULAR RHEUMATIS

The full alkaline treatment is commonly adopted in the treatment of this affection. Dry cotton is the most commonly used local application. Hop poultices are occasionally employed.

If the temperature becomes *high*, demanding active measures for its reduction, the patient is placed in a bath of the temperature of 60° F., and permitted to remain there until the temperature of the body has fallen within reasonable limits. Dover's powder is given to relieve pain; and, as soon as the acute stage has passed, quinine gr. xv. per diem.

PNEUMONIA.

In the main, the treatment of this disease is expectant. Rarely is local blood-letting resorted to. It is occasionally employed for the purpose of relieving local pain. Sometimes digitalis is used; sometimes veratrum viride; but these remedies are administered only in a small proportion of cases. Quinine, ten grains a day, is quite commonly administered with a nourishing liquid diet. What is called the "jacket-poultice" is, as a rule, applied. The jacket-poultice is simply a linseed meal poultice sufficiently large to cover the whole chest, and usually has a little powdered mustard sprinkled over the surface, or mixed with it. Most of the patients recover. The application of cold to the chest has never been adopted. Quinine in *large doses* has been used for the purpose of reducing high temperature, but it does not enter into the plan ordinarily adopted in the treatment of the disease. Carbonate of ammonia is used when an active stimulant expectorant is desired, or its general stimulating effect.

SUB-ACUTE PLEURISY.

Diuretics (iodide of potassium, acetate of potash); tonics and good food; and moderate counter-irritation. Paracentesis thoracis is performed rather late in the progress of the case, remedies having first been faithfully tried. To relieve the pain of the more acute form of pleurisy, and also of this form, the local application of *cold* has been resorted to with good success.

DELIRIUM TREMENS.

Bromide of potassium and hydrate of chloral are the remedies commonly employed. The potassium is administered in doses varying from 20 to 60 grains, and the chloral may be given perhaps twice during one night in doses varying from 15 to 20 grains.

In one case, chloral, bromide of potassium, and morphine has failed to produce sleep, but whiskey, in half ounce doses every half hour, accomplished the desired effect. When nervous symptoms dependent upon alcohol are present, a dose of whiskey is ordinarily administered before resorting to any medical treatment whatever. The hospital staff are about equally divided upon the question of bromide of potassium being able to produce sleep.

ACUTE PERITONITIS.

Opium is the chief remedy employed.

NIGHT SWEATS OF PHTHISIS.

Sulphate of atropia is regarded as an excellent remedy for their arrest. It is usually administered in a simple dose at bedtime of $\frac{1}{60}$ of a grain.

Aromatic sulphuric acid.

Niemeyer's pill. Niemeyer's pill and atropia used in conjunction. Oxide of zinc and hyoscyamus were said to be efficient with their cases.

The pill called Niemeyer's, or the one he ordinarily prescribed, properly known by the name of Heim's pills, is in general prescription. The formula for the pill is as follows:

℞. Pulv. herb. digitalis..... ℈ss.
Pulv. rad. ipecac.
Pulv. opii puri, āā..... gr. v.
Ext. hellessii, q. s. u. f. pl..... No. xx.
Comp. pulv. rad. irid. flor.

S. A pill three times daily. The addition of a scruple of quinine to the above prescription constitutes Niemeyer's modification, and is added for its antipyretic effect. This pill of Niemeyer's is one very commonly prescribed in this hospital in cases of phthisis, and is regarded as a very valuable combination of remedies.

HÆMOPTYSIS.

Hypodermic injections of ergotine were mentioned with special favor. The solution used is of such strength that ℥xv. contain one grain of the ergotine.

Inhalations of the oil turpentine are frequently employed.

As good success has attended the use of the above remedies as any which have been employed.

DIARRHŒA OF PHTHISIS.

Among the many remedies and combinations of remedies that have been used, the following prescriptions have obtained some reputation for good:

℞. Opium..... ⅛ to 1 grain.
Bismuth subnit..... gr. xv.
Ipecac..... ½ grain.
M.

Taken p. r. n.

℞. Nitrate of silver..... ¼ gr. to ½ gr.
Opium..... ½ gr. to 1 gr.
M.

Ft. pil.
To be taken p. r. n.

℞. Strychnia sulph..... $\frac{1}{15}$ gr.
Bismuth subnit..... 15 to 20 gr.
M.

Taken p. r. n.

TYPHOID FEVER.

Treatment, in the main, expectant. Some of the visiting physicians prefer to have administered about 18 gr. of quinine daily for the purpose of preventing tissue waste. The acid treatment is also regarded with favor; that is, the administration of some one of the mineral acids in moderate doses from the beginning.

Glycerine and water has been employed for the purpose of reducing the temperature when it becomes moderately high, and it was thought with more satisfactory results than sponging with simple water. The proportions used are—

℞. Glycerine..... ʒ iv.
Water..... O i.

When *hemorrhage from the bowels* occurs, the chief reliance is upon cold applications and the use of suppositories containing various astringent remedies, but especially opium. All necessary measures also must be adopted to sustain the patient until the crisis has passed.

ERYSIPELAS.

The case was an ordinary one, in which the disease affected the head and face.

Tr. iron and quinine were being used as internal remedies.

These remedies are uniformly employed in these cases.

For external applications the lead-water with tr. opium is a favorite, although not especially new.

Oxide of zinc ointment is sometimes used. Hyposulphite of soda, combined with some mucilaginous mixture, is a favorite application with some of the visiting physicians.

SCARLET FEVER.

Treatment of the fever is mainly expectant. Stimulants are of benefit in the class of cases seen in this institution.

For the dropsy which sometimes appears, diuretics are used, and if the children have some age, purgatives are administered. When throat symptoms are prominent, a very common prescription is a saturated solution of chlorate of potash in tr. of iron and well sweetened with honey. The dose is to be regulated according to the size of the dose of iron proper for the age of the child. The rates of mortality are low.

DIPHTHERIA.

Constitutional treatment by means of quinine and iron.

Local application, most commonly of dilute muriatic acid, sometimes of tincture of iron. The resident physician had but little faith in the power of lime-water to dissolve the membrane, for the reason that he had kept for a long time a specimen of membrane that had been preserved in lime-water.

Alcoholics are not administered until the system needs them. It is believed that this is the better plan, for the reason that, if commenced early, they are liable to produce more or less nausea, perhaps vomiting, which may prevent their use at the time when they are most needed. Local applications are made to the throat if the throat is very much inflamed.

Treatment with calomel and bicarbonate of soda had just been adopted in a couple of cases, but the results were undetermined.

WHOOPING-COUGH.

Hydrate of chloral is the common remedy, and gives very satisfactory results. Sometimes belladonna is combined with it.

The remedy is pushed as much as possible; commencing, in a child from one to two years old, with one to two or three grains t. i. d.

Sugar had been found in the urine of all these patients.

The co. tr. benzoin is sometimes added to the chloral to stimulate the kidneys to increased action, when the chloral has rendered them somewhat inactive.

FACIAL ERYSIPELAS IN PREGNANT WOMEN.

Erysipelas was developed in three pregnant women a few days before confinement. Their labors were easy and they recovered without a single bad symptom. The erysipelas passed away with the most favorable termination. Every other woman, however, who was in the same ward was affected by something which caused the temperature to rise upon an average to 103° the day after confinement. Many other symptoms of equally unfavorable import were developed in connection with the rise in temperature. After the second case opium and quinine were administered for a few days previous to confinement in anticipation of serious puerperal trouble. There were no deaths.

PUERPERAL FEVER.

Opium in sufficient quantities to calm all local irritation; quinine in tonic doses; sometimes in large doses, gr. xxx. a day, to reduce the temperature; veratrum to control the pulse; fair amount of liquid nourishing diet; and alcoholics if necessary. If veratrum produces vomiting, aconite is substituted for it. Care must be exercised in the administration of aconite lest its depressing effects be too markedly produced. It is much easier to bring up from the depression of

veratrum than from the depression of aconite. Turpentine stupes are applied to the abdomen if tympanites is present.

One case, probably puerperal septicæmia, was treated by giving nitro-muriatic acid dilute in doses of twenty drops every two hours; lead and opium lotion to the abdomen; opium simply to quiet; quinine grs. xxx. daily for three days. The bowels moved several times each day, and the discharges were exceedingly offensive. No measures were taken to arrest the discharges, and they did not produce exhaustion. The patient recovered.

QUININE AND MORPHINE.

It had been noticed in several cases that, when one-quarter of a grain of morphine would not produce sleep, if ten grains quinine were administered a short time previous to administrating the morphine, the morphine would almost invariably act efficiently. This fact was noticed in connection with puerperal cases.

MAMMARY ABSCESS.

Quinine in full doses as soon as chill occurs. Cease nursing at once, and remove the milk by hand rubbing, covering the parts with warm lard, and rubbing from the base of the gland towards the nipple.

QUININE OF GLYCYRRHIZA.

To disguise the taste of quinine administer it in fld. ext. of glycyrrhiza. If fld. ext. is not at hand, the powder can be used with nearly the same result.

INJECTION OF PULMONARY CAVITIES.

In two cases in which there were well marked signs of cavities in the lungs, from 15 to 20 drops of a 15 per cent. sol. in water of Trousel's solution were thrown into these cavities by means of a hypodermic syringe plunged directly through the walls of the chest. This was done with the result of producing an improvement in the general symptoms, and very much less expectoration. The measure was suggested for the relief of hemorrhages.

DECADENCE OF THE UNIVERSITY OF BERLIN.—The diminution in the number of students at the University of Berlin, which had already been noticed during the last three months of the summer of 1873, has again been observed during the six winter months of 1873–74. The *Gazette de Cologne*, commenting on this falling off, remarks that hitherto as a rule the University medical courses were more numerously attended than the other ones. It seems, however, certain that the number of students of medicine has sensibly diminished; one professor having 100 fewer students in his class than he had in the preceding year. In short, the number of students has reached its lowest point in comparison with former years. The University is now outstripped in numbers, not only by that of Leipzig, but also by the University of Göttingen, which now contains 1,000 students. It appears that in Germany the salary of the professors, which, inclusive of the students' fees, is considerable, is only increased if they be requested to transfer their services to other seats of learning, and if their departure be considered injurious to the interests of the University which they have hitherto taught. Thus distinguished professors have been drafted to the University of Berlin, but this has not been accomplished without promising them double the salary offered some years since. This increase of salary is rendered imperative by the continually increasing price of the necessaries of life in Berlin, as in other parts of Germany.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 7, 1874.

DR. J. LEWIS SMITH, VICE-PRESIDENT, in the Chair.

FRACTURE OF ILIUM.

DR. SAYRE presented a specimen of fracture of the ilium produced by a runaway accident, in a boy eighteen years of age, a resident of Jamaica, Long Island. On Sunday night of Sept. 27, Dr. S. was sent for by Dr. Wood of that place to see the patient, the statement of the messenger being to the effect that the injury was a very severe one, that the fracture was a compound one in the neighborhood of the hip, and was evidently caused by being thrown upon the stump of a tree. When it was stated that the boy had walked two or three steps after the injury the conclusion at once was that the thigh had not been fractured. Dr. Sayre found the patient lying on his back, and bleeding quite profusely from two wounds, each about an inch and a half long, situated just above the trochanter major. The isthmus between the openings was cut through in order to facilitate a thorough examination. Introducing the finger into the wound a fracture of the crest of the ilium was at once detected, and the loose pieces of bone were removed through the external opening. The specimen consisted of the summit of the crest of the ilium, and was about four inches in length. It was supposed that the external wound was produced by the lower edge of the upper fragment being tilted and tearing its way through the integument. Dr. Sayre believed such accidents very rare, unconnected with railroad collisions and gunshot injuries.

There was considerable hemorrhage at first, but this was fortunately checked by twisting the divided ends of a small artery, which proved to be a branch of the middle gluteal.

RUPTURE OF GALL-BLADDER FROM FALL.

DR. JANEWAY exhibited a specimen of rupture of the gall-bladder removed from a patient of Bellevue Hospital, who was admitted a few days before his death, and who had received an injury from a fall from a mast striking the deck flatwise. He soon after showed signs of peritonitis, from which disease he died at the end of a very few days.

At the autopsy there was found a transverse fracture of the sternum at its point of junction with the third costal cartilage, attended with bloody effusion in the anterior mediastinum, and in the pericardium. In the cavity of the abdomen there was discovered serous effusion with fibrinous flocculi and also in the pelvic cavity. The effusion was more or less bile-stained, in the pelvis, and in the neighborhood of the liver. In the folds of the mesentery there was a good deal of bile effused, as was also the case all along the ascending colon around and in the fat capsules of the kidney. The peritoneum around the gall bladder was uninjured, the rupture in the viscus being through the mucous membrane, thus allowing the infiltration of bile to take place underneath the peritoneum and in the manner already described. The gall bladder itself was distended with bile and adherent to the transverse colon, at which point there was a small amount of suppuration. It appeared to be evident that the adhesion, together with the distended condition of the organ, were the principal reasons why rupture had occurred.

FALLOPIAN ABSCESS, ETC.

DR. JANEWAY presented a second specimen, for the following ante-mortem history of which he was indebted to Dr Rankin, of Bellevue Hospital:

"I saw the patient for the first time on the 29th of September. She had then been confined to her bed four days. Her condition was as follows:—Face very much suffused; tongue heavily coated; she had intense thirst; was unable to retain anything on her stomach; had nausea even when no food had been taken for some time; pain on somewhat firm pressure in the right iliac fossa, and also over the bladder. Two or three times a day she would have a sudden chill, and with the chill, intense pain deep in the pelvic cavity. And at the same time there would be a sudden profuse watery diarrhœa, coming on sometimes so suddenly, that she would not have time to get out of bed. This would be followed by extreme prostration and a very rapid pulse. Temperature 102½°. Pulse 125. Ordered opium and quinine, bismuth and pepsin, and put her on a milk diet and beef-tea.

"September 30.—Feeling somewhat better. On making a vaginal examination (digital), I was unable to find the os uteri, or make out the anterior or posterior lip. There appeared to be a tumefied condition of the parts, prohibiting the mapping out of the organ. I was able to press the uterus upwards without any or with very little pain. There was a bloody discharge, which was quite offensive.

"October 1, A.M.—Passed a more comfortable night. Temperature 100°. Pulse 100. P.M.—Since morning has had two quite severe paroxysms of pain. Considerable pain on pressure over the whole of the lower part of the abdomen. Temperature 102½°. Pulse 130. Tongue heavily coated—is troubled considerably with hiccough.

"October 2, A.M.—Temperature 102°. Pulse 120. Very much prostrated, not much pain except on pressure—has had no vomiting or diarrhœa for the past two days. P.M.—Dr. H. T. Hanks saw the patient with me. Temperature 102°. Pulse 120.

"October 3, A.M.—Patient slept all last night; is in a state of collapse. Temperature 105°. No pulse. Died at 2 P.M.

"*Previous History.*—Ten months ago, during her menstrual period, she went out wearing slippers, on an intensely cold day. She was immediately laid up with peritonitis, and was confined to her bed for two weeks. Since then, at every menstrual period, she has had a more or less severe attack of peritonitis. Three months ago had a miscarriage."

DR. JANEWAY remarked that the reason why Dr. Rankin could not map out the os was quite apparent when the parts were examined at the autopsy. The posterior cul-de-sac was obliterated by a cicatrix, and the os was almost entirely closed. The cavity of the uterus was somewhat distended. Posterior to the uterus there was found an abscess, formed by a distended Fallopian tube, and bounded on one side by the posterior layer of the broad ligament, and on the other by the cul-de-sac of the rectum. Fatal peritonitis was produced by an ulceration through the right Fallopian tube, at a point two inches from its entrance into the uterus.

The primary origin of the abscess was supposed to be metritis.

OBSCURE CASE OF CANCER OF STOMACH.

DR. DELAFIELD presented a kidney and heart, taken from a patient who died at the Roosevelt Hospital the day previous. The patient was fifty-five years of age, a 'longshoreman by occupation, and was admitted July 29. He then gave a history, that he had been suffering for nine months with pain and vomiting after eating; the pain coming on half an hour after eating, and the vomiting an hour after. These attacks of pain and vomiting, which occurred only from time to time, became more frequent, until shortly before his admission every meal was attended with these symptoms. When admitted he was much emaciated, and presented a cachectic appearance. There was no tumor in the epigastrium, nor was there any particular tenderness. His liver was somewhat enlarged, but his chest organs were normal, and there was no sign of disease in his urine.

After being in the hospital for a while the pain and vomiting ceased, not to return until he died. In fact, during his stay in the institution he was in a condition which rendered a diagnosis very difficult, not making any complaint. There was nothing to draw attention to any particular organ, and nothing occurred except two attacks of diarrhœa, one of these lasting ten days, and the other two weeks. These attacks were very severe—were rebellious to all the usual remedies—and ceased, apparently, of their own accord. He grew steadily weaker, and died Oct. 6.

At the autopsy a cancerous growth was found at the pyloric orifice of the stomach, nearly surrounding and closing it. The kidneys were pretty far advanced in chronic nephritis, and the upper lobe of the left lung was the seat of red hepatization. The intestines were normal. The urine was examined repeatedly during life, and nothing abnormal was found, except a few days before death when it became scanty; at the same time the legs became œdematous.

The interest of the case centred in the obscurity of the symptoms.

DR. SELL referred to two cases then under his observation, in which the symptoms markedly resembled those in Dr. Delafield's case, and in which he expected to find the same autopsical lesions.

PERFORATION OF APPENDIX VERMIFORMIS.

DR. WEIR presented an appendix vermiformis, which he had removed that afternoon from a gentleman, aged fifty, whom he saw, in consultation with Dr. Purdy, the Friday evening previous. The patient was then suffering most intense agony, with vomiting, retraction of the testicle, and frequent passage of scalding urine. The pain which had been felt in the right flank had shifted somewhat downwards and inwards. The abdomen was rigid and no thorough examination could be made. In the supposition that a renal calculus was passing, the pressing indication was to relieve distress, and a hypodermic injection of morphine was accordingly administered. He had some fever the day following, some chills, and a small amount of pain.

The next evening an examination was allowed, and the diagnosis of perforation of the appendix vermiformis was made. Dr. Sands, who was present at the time, confirmed this conclusion.

The patient subsequently died of peritonitis.

At the autopsy the posterior margin of the appendix was found perforated, and through the perforation a hardened calcareous mass had been found.

DR. SELL asked if the surface thermometer had been used over the appendix, and being informed that it had not, referred to an instance in which the surface showed a difference of three degrees over the seat of such an inflammation.

Dr. SANDS remarked that the case presented none of those physical signs in the shape of circumscribed

abscess, which were considered as sufficient to call for operative interference. It was also a curious fact that this very severe peritonitis should have occurred without any perceptible escape of fæces in the peritoneal cavity.

Dr. Delafield remarked that in many instances the appendix would become inflamed independent of any apparent exciting cause external or internal to it, and in those cases the inflamed organ seemed to be a sufficient exciting cause for the fatal peritonitis.

Dr. Sands had no doubt that such was frequently the case; that in some instances thes imple inflammation of the appendix might result in gangrene and then give rise to peritonitis; still he believed that there were many other cases in which there was a very small escape of fæces—so small as to escape notice except by its odor, and the quantity being never so small was almost always enough to excite fatal peritonitis. The peritoneum was very intolerant of a mere drop of urine or the slightest amount of fæcal matter.

The Society then went into executive session.

NEW YORK JOURNAL AND LIBRARY ASSOCIATION.

Stated Meeting, Oct. 2, 1874.

Dr. J. C. Peters, President, in the Chair.

CONTRACTIONS OF THE PALMAR FASCIA.

The paper for the evening was read by Dr. A. C. Post, and entitled, "Contractions of the Palmar Fascia." A brief allusion was first made to the anatomical relations of this fascia, and then the author of the paper passed to the consideration of the causes which may give rise to this morbid condition. These were set down as being chiefly of traumatic origin, such as handling of oars, driving chisels with the palm, and other injuries of like character. This morbid condition is to be diagnosticated from persistent flexion of the fingers from other causes, such as the result of sloughing wounds; from the cicatricial contractions of burns; from paralysis of the extensor muscles; and from rheumatic and gouty affections. It affects the ring finger most, and the little more than the index-finger. These flexions are accompanied by arched folds and arrangements of the skin which have their *concavities* towards the fingers.

A careful consideration of the history of the cases of contraction affecting the palm is usually sufficient to enable the surgeon to make a correct diagnosis.

The disease was first described by Dupuytren, but has not been generally recognized by authors; and, on the contrary, it has been regarded as being due to some other condition, such as has been enumerated.

As regards prognosis, if the disease is left to itself it undergoes no amelioration, and the change which takes place is from bad to worse. If the contracted bands be divided, the hand and fingers secured upon a splint, and passive motion be vigorously and persistently applied, a good degree of motion may reasonably be expected to be obtained.

The treatment at the outset must be operative. The patient should always be anæsthetized. The incisions should be made as nearly subcutaneous as possible, at points wherever capable of relieving tension, and without wounding the skin more than is absolutely necessary.

The subsequent treatment is both tedious and painful. The wounds are to be immediately covered with adhesive plaster. The hand should at once be placed upon a metallic splint which should cover the posterior surface of fingers and hand, and extend somewhat upon the forearm. The splints must be well padded with woollen batting and lint, each finger secured to its own portion of the splint by means of adhesive plaster, and the splint secured to the hand and forearm by means of a roller bandage. The dressing should be changed daily, the wounds kept well cleaned, and passive motion persistently and regularly practised.

The histories of four cases were read, and in all of them the curious fact was noticed that flexion in the latter stages of the treatment produced more pain than extension, although flexion was the original deformity. The ability to flex the fingers fully is very slowly gained.

Dr. Weisse remarked, with reference to the pathology of the affection in question, that the reason why this peculiar contraction of the palmar fascia was produced, leading to flexion of the fingers, with inability of extension, rested probably in the peculiar anatomical arrangement of the palmar aponeurosis itself. This aponeurosis, as it passes down to the centre of the palm, between the hyperthenar and thenar eminences, presents us with transverse fibres, and also longitudinal ones, which are attached to the skin of the fingers at its deeper portions. It is in these straight fibres that we have to look for the explanation of the contraction of the fingers, independent of the tendons within the theca.

Dr. Post reported a case of lumbar colotomy, in which the operation had been performed upon a child three and one-half days old. There was absence of both anus and rectum. There had been a minute discharge of fæcal matter with the urine. All the distressing symptoms were relieved by the operation, and then, six days after the operation, the child was doing well, and bids fair to recover.

Dr. Peters exhibited a specimen of what has been called "sneeze-weed" (Helenium Autumnale), which is said to be the cause of what is known as "hay catarrh."

Dr. Buck exhibited an instrument which he had devised for conducting the chain-saw around deep-seated bones, exsection was intended.

The Association then adjourned.

Medical Athletes.—Two of the finest athletes in Washington are members of the medical profession, Dr. W. V. Marmion and Dr. I. C. Rosse. The former gentleman lifts 1,000 pounds with his hands, and puts up a dumb-bell of 130 pounds. Dr. Rosse is probably the strongest man in Washington for his size. He lifts 400 pounds with one hand; is equally as good as Marmion with the dumb-bells, and suspends 63 pounds at arm's length on his little finger.—*Washington Chronicle.*

Kjevulf.—Died, on the 7th September last, Chr. T. Kjevulf, M.D., etc., etc., Chief of the Medical Department of the Interior, Norway. He was born in 1823, served as surgeon in the Danish army during the war of 1848–49; was appointed chief in 1857, and was an industrious writer in the "Norsk Magazin for Lægevidenskaben."

Lepers.—According to Dr. Hansen, in the *Bergens Post*, the number of lepers in Norway, in 1870, was 2,350, or 500 less than fifteen years previously. The Doctor very reasonably congratulates his countrymen on the fact, adding the hope that the disease may be ultimately eradicated.

Correspondence.

HYDROPHOBIA ON THE DECLINE.

Pine Ridge Papers.

IV.

I am sorry to say that any continued discussion of hydrophobia is getting out of season. This, however, is no fault of mine, as I have endeavored to make the most of my opportunities and have striven to keep alive an interest in the subject not only for the good of science, and the stimulation of experimental research, but for my own personal benefit. There is a time, however, when the most enthusiastic and disinterested worker must make the unwelcome acknowledgment that his labors no longer claim that amount of attention which he naturally desires. The newspapers find it impossible, on account of the cool weather, to develop any fear of the disease in their readers, and dogs command no more notice than if hydrophobia did not sometimes exist and was not to be dreaded.

I had some hopes of creating a little excitement by the spread of the malady through the dogs of my neighborhood, which I had clandestinely inoculated, but my friend, the reporter, who promised me at the time to work up the cases for his paper, became so much engaged in attendance upon political meetings that he has entirely neglected me. Notwithstanding this, however, one of the dogs has "gone through" one of the most influential families of the place, and I have had six consultations and three post-mortems in consequence. While speaking of these cases I may mention in passing that I had considerable trouble in convincing my consulters that I was right in my diagnosis. They all contended that the time for the disease had passed, that there was no epidemic, and that the symptoms were the results of imagination. In fact, so strenuous was their opposition to my views that I was forced to detail to some of them the reasons why I was sure of my opinion, and to demonstrate to the others the Kanine under the microscope. Two or three of these rather significantly and conceitedly expressed their doubts of what they saw. The results of my revelations in regard to my inoculation have been somewhat damaging to my professional reputation and have called down upon me the malignant enmity of several of my brethren. But as I expected this would be the case from the beginning, I have prepared several elaborate replies to their attacks which I hope may have the effect of prolonging a discussion upon a subject which naturally is of a great deal of interest to me.

It would be strange, indeed, taking into account the great publicity which my experiments and their results have gained, if I, in common with other investigators, had not suffered from the persecutions of the Humane Society for Animals. The President of this Society happened upon me at a very inopportune moment, when I was applying the aspirator and explaining its mode of operation to a few dog-fanciers. He made no objection to the muzzle, but was vehemently opposed to the lever under the jaw as being uncomfortable, and most of all objected to the aspirator, claiming that the latter caused needless suffering, that God never made aspirators, that on that account they should not be used, and, consequently, that they were cruel. The worthy functionary was willing to strain a point by permitting the aspirator to be worn, but would not allow the skin to be pricked. My mucoid assistant was quite offended at this interference, and triumphantly showed the instrument which he has "worn in his shirt collar for six months without change, and without the slightest inconvenience," but the President quoted a few appropriate texts and settled the argument at once. The result has been, that my establishment has been closed, my aspirators confiscated, and threats have been made to forbid me experimenting with the Kanine, principally on the ground that I have no legal right to use any substance obtained through the instrumentality of vivisection. Our county society has, however, taken up the subject, and declared its intention to pass resolutions against the interference with rights of professional property. I may say in passing, that I have prepared this substance in suitable vials, which are for sale at all the principal drug-stores. Sausage makers supplied at wholesale rates. It is unnecessary to state here that all my dogs have recovered, and have been discharged cured.

After the closing of the establishment, I was visited by a health inspector, who had been ordered by his head(s)-center "to examine and report." He discovered to his satisfaction that none of my animals had been vaccinated, and that the new cases of rabies had not been promptly reported, that the beds had not been properly aired and were developing zymotics; and that the urinals had not been sufficiently disinfected. In his report he condemned the establishment "as a disgrace to civilization, sanitary science, professional integrity, discrimination, and knowledge." I should have been very much discouraged in the hope of making my hospital popular had I not thought of the expediency of an interview with one of the Health Wardens. I told him my story, showed him the report and presented him with a vial of Kanine. He smiled, was much interested in my discoveries, and told me to pay no attention to the report, that the profession must stand by each other, and that he would use his influence in my favor. At his suggestion and with the promise of his protection I have had my institution reconstructed, built upon the pavilion plan, have laid four drains for every kennel, placed two extra ventilators in each ward, a piece of carbolic soap in each urinal, constructed new traps for the water closets and have entirely done away with a large sewer, the roots of my pine-trees serving such a purpose. In addition to this, I have also established telegraphic communication with headquarters so that I may report any new case the moment I find the Kanine in the laryngeal mucus. It is necessary that these facts should be borne in mind in anticipation of another epidemic of rabies, and their importance impressed upon those who desire to favor original research.

But now I wish to speak more particularly of the merits of the Pine Ridge aspirator. Of all the patients whom I saw in consultation, and who died, none would use the instrument. If this does not explain the mortality, I am willing that it "shall be put on record" as a curious, if not remarkable, coincidence. The main objection to its use was urged by the patients' friends, who persisted in declaring that the wound which it occasioned in the neck would spoil the looks of the corpse. This objection was made in the very face of my mucoid assistant, who showed that all unsightly marks could be concealed by the shirt collar, and that even the aspirator itself could be worn, if necessary, by a dead body without being seen. As further proofs of his correct views in the matter, he submitted certificates to that effect from several undertakers who had had a large experience with the hydrophobic patients of my brother-practitioners. It was to no purpose, however, and I only desire by referring to the circum-

stance to place the responsibility of the mortality where it rightly belongs.

Another point bearing upon the great utility of the aspirator may be mentioned in connection with my first assistant, who was bitten in the buttocks and died asphyxiated. In that case death occurred before the aspirator was perfected. The conclusions to be arrived at in this case are quite obviously in favor of the instrument. While speaking of this Pine Ridge aspirator, I am compelled to state that it cannot be used second-handed without some danger of infection. An enthusiastic medical student who happened to be present when the instrument was removed from the throat of one of my dog patients (who had by the way recovered) was curious to see how the instrument would act upon his own person, and inserted the needle in his throat, playfully remarking at the time that he could swallow tobacco juice with impunity. It is needless to say that he became infected, and that he is compelled to wear the instrument constantly. Instead of tucking it in his shirt collar, he has had another pin made for it, and wears the instrument as an elaborate scarf-pin.

I have examined very carefully into the cause of infection in these cases, and find that it is altogether due to the collection of the Kanine around the end of the needle. These granules are apt to lie dormant for a very long time when bathed in laryngeal mucus, and in this respect are very like the spermatazoons which lurk around the Fallopian passages for months ready to pounce upon any stray ovum that may come within their reach, and make it the prey of protoplastic influences. I have already referred to the tenacity which this granule has upon life when I likened it to the syphilitic corpuscle of which we know so much. In view of the danger of using second-handed aspirators, I take occasion not only to advise my readers not to run any risk, but also to state that I have made arrangements with my instrument maker for supplying any quantity of entirely new ones.

Bearing upon the question of the pathology of the disease and at the same time affording me another opportunity for referring to my instrument, I may mention a very interesting fact. My present assistant, whose many narrow escapes have made him a little cautious, on one occasion tickled the nose of one of the hydrophobic dogs by means of a straw through a knot-hole in the fence. Almost immediately afterwards the animal sneezed, then rolled over in a hydrophobic convulsion and very soon expired. I explained the cause of death as reflex action, simply remarking at the time, that the animal was so saturated with Kanine that the least excitement in the shape of peripheral irritation was sufficient to disturb the relation of the granular hydrophobic elements, to cause the secretion of more laryngeal mucus, and to set up that promiscuous interchange of nervous forces which is known under the generic term of convulsion. At the time I expressed the suspicion also that the aspirator had become clogged.

In thus accounting for the phenomena, I am happy to say in behalf of my theory that the principle established was correct, although it was proved in a different manner from what I at first expected.

At the autopsy of this dog the aspirator was kept *in situ* with the determination of entering the base of the brain through the throat. It was then discovered that the needle of the aspirator had really become clogged by perforating the root of the hypoglossal nerve, the accident being evidently occasioned by the efforts at sneezing during life. No one can deny that there was irritation at the root of this nerve, and that the Kanine granules at that point must have been sufficiently disturbed to have reflected the convulsion to the extremities. I claim that a slighter amount of irritation would have accomplished death with equal certainty, provided the tube aspirator had not become impervious.

In order to prevent a similar accident from sneezing in future, I have made the needle of the aspirator jointed, after the manner of the catheters in use, so that its movements can be accommodated to the constant change of the relative positions of the parts above the larynx. A detailed account of this modification, with a wood-cut, will appear in my forthcoming work.

* * *

PINE RIDGE-ON-THE-HUDSON.

MEDICAL MATTERS IN PHILADELPHIA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—The season of activity is again upon us, and the faces of hundreds of strangers to our city are visible in our lecture-room. We are just now giving these new-comers the cordial welcome as our future *confrères*, who are to follow in our footsteps and improve on our own achievements, whatever such may be, and howsoever modestly we may speak of them. It is too early yet to estimate these gentlemen numerically, although anticipations of large classes are indulged in by the sanguine among us. The interesting problem is, whether the removal of the University of Pennsylvania to its permanent and beautiful quarters on the western side of the Schuylkill, will or will not seriously affect it for a while in the dimensions of its classes, and its consequent pecuniary profits. With all the advantages of splendid buildings, ample accommodation for pupil and patient, with hospital teaching and practice at their very elbow,—for the cluster of University halls and edifices includes every available method of regular didactic and clinical instruction, and luxurious arrangements for professorial comfort, for I am told that each teacher has his own well-furnished office, with all the modern improvements attached,—there is but one drawback to success, and that is peculiarly Philadelphian, and consists in the fact that this time-honored institution is now two miles distant from its ancient hallowed vantage-ground, having emigrated to a region scarcely yet invaded by students' boarding-houses and the usual accompaniments of elderly spinsters, widows, and mediocre diet, including hash, which forms an integral portion of the bill of fare reserved for them in all the large cities where these gentlemen most do congregate. My own impression is that at first the students will not take kindly to the change; but this can be but a temporary check to the continuously prosperous career of that school. It would be absurd to suppose that for any lengthy period young men coming to our city for medical instruction would be afflicted with the morbid Philadelphia epidemic weakness or delusion, that, within a few blocks of the business centres of the city, there is and should be concentrated the united medical wisdom of the whole community, and that more than a mile or so to the north or south of this restricted area is positively suburban. In such a view I scarcely know how Bellevue Hospital Medical College, distant as it is from the busy haunts of down-town trade, would appear to us, if similarly located here. In the parlance of relationship, we should consider it as a medical cousin, very far removed.

While wishing the University all the success it

richly deserves, I cannot help thinking that the Jefferson Medical College has done wisely to remain at its old battle-field of medical instruction. Its natural interests would be, now that its older neighbor has deserted it, to stay where it is, and when pecuniary resources become available in better times, when panic-stricken contributors to charitable funds become more cordial and fearless, to build for itself a hospital commensurate with its importance and merits, and then extend its facilities for clinical teaching and its area of illimitable usefulness. The University has, thus far, by efforts made a year or two in advance of the other school, secured a large share of legislative, municipal, and private assistance, and when the panic came there were not more than the crumbs left for its younger rival, though the full loaf must be its portion in due time. The University was forced into a false position last winter by the purchase of its old ground by the National Government as the site of the new post-office, and the subsequent action of its trustees in the rental of the building occupied in former days by the Pennsylvania Medical College, now, I believe, corporately defunct, but latterly by those who almost took the University name in vain, and whose course of instruction was not recognized by either of the other colleges. The latter party contends that the occupation was obtained by fraud, and that they have driven their venerable neighbor out; but the latter may be congratulated that it has now its own abiding-place, with its halo of respectability untarnished by any mere temporary surroundings.

There is scarcely a ripple on the surface of the medical world here at this moment. We have not even a libel suit on hand to stir us up to more than our usual animation, and it seems almost too late in the season to report any hydrophobic cases for microscopic examination. Our medical journals float along on the tide in the same old-fashioned way as of old, each differing widely in its aims and objects; one or two of them treading on the toes of sensitive subjects, with different degrees, however, of roughness or delicacy. When the "Ishmaelite of the Philadelphia *Medical Times*," as your friend Dr. Hammond called its editor, who is also the author of a recent excellent work on "Therapeutics," assumed the charge of that journal last year, it soon became controversial and aggressive, evidently under the impression that the true way to awaken a public professional interest in it—for it had been a slightly soporific periodical in the days of its infancy—was to wage an unceasing warfare on every salient point of obnoxious attack in the medical world, including its various respectable and other offshoots, even if sensibilities were wounded, and delicate nerves of individuals and corporations ruthlessly exposed. But there is a point beyond which the patient reader feels ill at ease; he doesn't care to see the scalpel always in use when more delicate instruments are available, and the writhings of the victim are not always pleasant to behold. On this account it is doubtful whether the *Medical Times* is morally more popular from these rude dissections, although I have no data on which to found an estimate as to its business successes. The *Medical and Surgical Reporter* has been, during the European absence of its editor, in the hands of the worthy secretary of the American Medical Association. It was pleasant, in the correspondence between the publishers of THE RECORD and the gentleman who has brought suit against it for libel, to find so much delicate consideration shown to the editor of that journal in all the arrangements for conducting it, so that, even in a matter which might pecuniarily involve them, he continued to be the recipient of their confidence, undisturbed by any interference on their part.

A new hospital for the treatment of the diseases of women and children has just been opened here. It will be, for a time, chiefly a dispensary for the relief of the walking subjects of these affections, but may be the nucleus of an important institution in the future. Its sponsors have christened it the "Gynæcological Hospital," but the patients who are likely to resort to it will be sure to puzzle over the *Gynæco* portion of the name before they come to the *logical* conclusion as to its objects. These high-sounding titles do not promote the popularity of such institutions, however useful and meritorious the latter may be; and doubtless many a poor fellow will go there for treatment to learn that he is not classifiable in the ranks of the gynæcologicals, when he would unblushingly absent himself from a woman's hospital. The women themselves have, by the way, such an institution in progress of construction, and have sensibly given it the simple Saxon name which suggests the sex to be benefited in its path of usefulness, so that it is hardly fair, although strictly true, for the hospital first-mentioned to say that there is no similar institution (to its own) yet established in Philadelphia.

Imagine the intense feeling of satisfaction experienced recently by a modest member of our profession, unskilled in the arts of puffing himself into prominent notice in the medical or lay journals by full details of surgical operations innocently dropped where ubiquitous reporters may pick them up; or by advertising in the daily papers his residence, and at the same time the fact that he is a hospital surgeon; or even by investigations into nervous or other phenomena (illustrated with medico-popular unintelligible diagrams);—imagine such a man's satisfaction, I repeat, as, skimming through the pages of the new "Medical Register and Directory of the United States," with its 70,000 names, etc., of physicians—just issued from the *Med. and Surg. Reporter* office (the Register, I mean, not the physicians)—he finds about fifty lines of small type (more or less) following after his own name, giving his numerous titles of distinction (at least half of them he avers are omitted), the various learned papers he has contributed to a wondering world of science and literature, even mentioning the highest degree of M. T. which had been conferred upon him as an evidence of the quality of his intellectual development and of his preliminary education. What a satisfaction to him to find that men of so little distinction as Professor Samuel D. Gross and Joseph Pancoast, of this city, are, in the same volume, dismissed with the simple remark in the one case that he is "Professor of Institutes and Practice of Surgery in Jefferson Medical College, and Member of the Medical Society of Pennsylvania;" and in the other this last membership is the sole fact mentioned, "only this and nothing more." Among New Yorkers mentioned in it I notice the names of Drs. Sims, Emmet, and Peaslee, with their residences alone appended, while Dr. A. Flint is announced simply as Professor, and thirteen lines are devoted to Dr. A. Flint, Jr. But then these gentlemen did not furnish the facts for the preparation of the articles, when the editor kindly sent them the blanks for that very purpose, and how, therefore, was it possible for the latter to know that they were distinguished professors, members of numerous learned societies, or popular authors? How was he to know, indeed, that they had attained any eminence at all, unless they themselves should tell him so; and does not the preface to the work expressly state, in regard to the errors and omissions, that "those only

who have neglected to reply to the circulars are responsible for them?" The question naturally arises, however, Why should not a literary bantling, like the offspring of human kind, be at once dressed in the long clothes of extreme infancy, instead of being sent on its way through the world in scanty skirts?

Our city has been honored with the presence of Professor Erichsen, of London, for a few days past. It was certainly a gratification to the few members of the profession who had the opportunity of seeing him to give him a cordial welcome here; but his reception fell into the hands of a very select number, and as a consequence some of the best representatives of the professional and literary talent of our city were debarred the pleasure of sharing in it. Had the invitations been more general, the welcome would have been quite as sincere, and even more enthusiastic. It was certainly an oversight in the programme, if I am correctly informed, that he was allowed to leave the city without being invited to an inspection of the University and its new hospital. I was told to-day by a gentleman whose tendencies incline strongly towards the latter institution, that the professor's whole time was so completely blocked out by his Jefferson College entertainers, that there was no chance for the faculty or friends of the rival institution to lionize him, except as invited guests, themselves. Such may, however, be only the jealousy of competing interests; but yet the feeling of dissatisfaction has been repeated to me by others. Dr. Robert McDonnell, of Dublin, well known as a contributor to various medical journals abroad, and a gentleman of ability and culture, has also received the cordial greetings of a welcome guest.

Medical book publishers are so identified with the interests of the profession that it is only appropriate that I should mention the death of that estimable gentleman, Mr. William A. Blanchard, of the former firm of Lea & Blanchard, and Blanchard & Lea, which occurred in this city last evening.

Medical Items and News.

Dr. A. D. Rockwell writes to inform us that the use of his name upon a placard, advertising a patent galvanic apparatus at the Fair of the American Institute, was without his sanction or knowledge.

The undersigned Censors of the Medical Society of the County of New York, direct the attention of all practitioners of medicine or surgery in the County of New York to the following:

Act to Regulate the Practice of Medicine and Surgery in the State of New York, passed May 11th, 1874.

Chapter 436.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Every practitioner of medicine or surgery in this State, excepting licentiates or graduates of some medical society or chartered school, shall be required, and they are hereby commanded to obtain a certificate from the censors of some one of the several medical societies of this State, either from the county, district, or State society; which certificate shall set forth that said censors have found the person to whom it was issued qualified to practise all of the branches of the medical art mentioned in it. And such certificate must be recorded in a book provided and kept for the purpose by the county clerk of each county in the State.

§ 2. The censors of each medical society aforesaid shall notify all practitioners of medicine and surgery of the terms and requirements of this act, and shall request such persons, so notified, to comply with those requirements within thirty days after such notification; and if such persons shall not, within the time specified in the notice, or within such further time as may be allowed by special arrangement with said censors, not exceeding ninety days, comply with the requirement herein made, of physicians or surgeons, as the case may be, such persons shall thereafter be subject to all the provisions and penalties prescribed by this act for any violation of the same, and the president of the society making such request shall, and he is hereby required to, at once commence the proceedings authorized by this act against such person.

§ 3. It is hereby declared a misdemeanor for any person to practise medicine or surgery in this State, unless authorized so to do by a license or diploma from some chartered school, State board of medical examiners, or medical society, or who shall practise under cover of a medical diploma illegally obtained; and any person found guilty of such misdemeanor shall, for the first offence, be fined not less than fifty nor more than two hundred dollars. For any subsequent offence, not less than one hundred nor more than five hundred dollars, or by imprisonment not less than thirty days, or by both imprisonment and fine; and all such fines shall go into the county treasury of the county bringing such action.

State of New York, }
Office of the Secretary of State. } *ss.:*

I have compared the preceding with the original law on file in this office, and do hereby certify that the same is a correct transcript therefrom, and of the whole of said original law.

Diedrich Willers, Jr.,
Secretary of State.

In accordance with the above, every person practising medicine or surgery in the County of New York, who is not a licentiate or graduate "of some medical society or chartered school," and who desires to obtain a license from the Medical Society of the County of New York, is requested to make application within thirty days to the undersigned Secretary of the Board of Censors.

To aid the Censors in the discharge of the duty imposed upon them by the above law, every practitioner who is in possession of a license or diploma is hereby requested to fill out the annexed blank, giving full name and residence, place and date of graduation, or name of society granting license, with date of same, and forward it promptly to the Secretary of the Board of Censors.

(Signed)

John C. Peters, M.D.,
Abraham Jacobi, M.D.,
Gouverneur M. Smith, M.D., *Censors.*
Andrew H. Smith, M.D.,
Horace T. Hanks, M.D.,

H. T. Hanks, M.D., *Secretary,*
149 Lexington Avenue.

Name in full.....
Residence.....
College or University granting Diploma.....
Society granting License.....
Date of Diploma or License.....

Mr. Erichsen.—During the brief sojourn of this distinguished surgeon in this city, the Faculty of the University Medical College gave him a complimentary dinner at Delmonico's.

Original Lectures.

A CLINICAL LECTURE ON FISSURE OF THE ANUS.

By ERSKINE MASON, M.D.

ADJUNCT PROF. OF SURGERY IN THE UNIVERSITY MEDICAL COLLEGE.

(Delivered at Charity Hospital.)

To-day, gentlemen, I propose to show you some cases of fissure of the anus, and a case of ulceration within the sphincter, giving you, as in my former lectures, a brief description of these affections as regards their general history, symptoms, diagnosis and treatment.

First.—I show you in the person of this young woman a case of fissure of the anus, or, as it is called by some, irritable ulcer of the anus or rectum. Though in many cases the term irritable ulcer is a proper one to be applied to this affection, I prefer to-day to speak to you of it simply by the name of fissure, so that you will not be liable to confound it with that affection which I shall at another time speak to you about, namely, ulceration of the rectum, which, though as you shall see, exists in connection with fissure, yet at times is present entirely independent of a fissure of the anus.

I think I am safe in telling you that no disease to which this portion of the bowel is liable (except it be cancer) at times, causes a more distressing or painful train of symptoms; and yet when I show you the fissure in the anus of this patient before you, if you knew nothing of its symptoms, but judged of it only from its appearance, you might regard it as a very trivial affair, no more perhaps than you would a chap on the back of your hand in winter-time. The symptoms, however, are most tormenting, and the agony at times endured excruciating. The symptoms of which the patient complains are usually these:—Great pain on movement of the bowels, and this often lasts for a considerable time after an action of the bowels. The character of the pain is often compared to the passage of molten lead, or a hot knife cutting or tearing the bowel. Indeed, in aggravated cases the pain is so severe at this time as to compel a patient to lie down and rest. As a result of all this, a movement of the bowel is constantly dreaded, and in some instances is postponed for days, which sooner or later brings about dyspeptic symptoms, and renders the patient's condition truly miserable. Nor is pain only an attendant upon going to stool: while exercising or even when sitting down, they may be subjected to sharp lancinating and bearing-down pains. You will also read, if you do not meet with cases, where the uterus and bladder are so affected that the source of trouble is supposed to be located in these organs: pains in the back and limbs are also a very frequent accompaniment of fissure. If you will carefully study the anatomy of the nerves supplying this region, you at once see why these symptoms are present. A spasmodic contraction of the sphincter muscle is very often present; and a slight discharge of blood may be noticed at times, especially while at stool, which leads the patient to believe is the source of his hemorrhoids; the pain experienced from this affection has often led people to suppose they had cancer. The cause of this severe pain is due no doubt to exposure of some nerve filament to pressure of the fæces, and into such a state of irritation or inflammation does it pass, that the slightest touch, or the pressure of the opposite side of the bowel, is sufficient to bring about these distressing symptoms.

All this suffering, if long continued, will often undermine the health and make one appear a confirmed invalid. You will be surprised to hear patients relate the agony which they have so long endured, either from their dread of an operation, or because the true source of their trouble was never made out. If fissure is so easily detected, as you have seen by our examination of this patient, you will naturally ask, why have some patients gone so long and often consulted many physicians, and used a variety of remedies, as has this girl, and yet obtained no relief?

The reason, gentlemen, is simply this: we do not often enough examine the anus or rectum, either from a foolish fastidiousness on our part, or because not wishing to annoy sensitive patients; therefore we too often content ourselves by believing the statement often made by patients that they are suffering from piles, and accordingly prescribe some medicine, which often does our patient no good, and certainly reflects no credit upon us as diagnosticians. Again, sufficient attention is not paid to these affections by general practitioners, so their patients, as the result, often drift into the hands of charlatans.

The cause of fissure you will often find due to constipation; the passage of hardened fæces tearing the delicate mucous membrane. A not unfrequent cause in the female will be found due to the acrid discharges which at times are observed from the vagina, which produce excavations around the verge of the anus. In this hospital we meet with great numbers of these fissures, a result of venereal disease. These, with the want of cleanliness on the part of some, will constitute the enumeration of causes. Not unfrequently we meet with several fissures in the same individual, again only one, and its location is often posteriorly towards the coccyx, though you will meet with them on either side of the anus; again directly in front, and we then call it perineal. This latter variety I think is most frequent in women. These fissures may be so small and be hid by the folds of mucous membrane, or covered by a small pile, that you have to search carefully for them. In examining patients who have suffered from fissure for some time, you will observe as a rule that the sphincter is well developed and the anus tightly closed, and perhaps the slightest touch will be sufficient to produce a spasmodic contraction of the muscle, and so great may be the pain that the patient shrinks from further examination. The whole length of the fissure is not always equally painful. Thus in the case before us I can touch the fissure lightly with the probe here and there without very great pain to her, but when this point is touched you see she recoils at once from the touch, and cries out with pain. At these very sensitive points some little filament of nerve is exposed, and you perhaps from this examination can appreciate how such a patient would suffer when the anus becomes distended, and the fissure is pressed against in the process of defecation.

These fissures at times resemble a mere crack or cut, again they are ulcerated, and at their termination within the bowel, yet within the embrace of the sphincter, we may find a distinct ulcer; indeed, you may at times find an ulcer here without a well-defined fissure involving the verge of the anus. Then it is appropriately termed *irritable ulcer.*

I have told you that this affection is met with at all ages. It is very common in females, and especially in young girls, whose constipated habits render them peculiarly prone to it, and who often, through a sense of delicacy, suffer for years before seeking proper relief, and from this cause you may see quite a train of anomalous symptoms presenting themselves, which may all have their starting-point from a fissure of the

anus. Now, with reference to treatment, and this may be divided into both medical and surgical; the latter, however, is by far the most satisfactory in every way, and we might say almost in a moment cures the patient. Before speaking of the means employed for its relief, let us ask the question: Does this affection ever get well of itself; is nature sufficient, without the aid of art, to cure this trouble? We cannot answer this question positively. Yet I feel sure if it ever is the case, it must be extremely rare. Under the head of medical treatment, we place first the use of mild cathartics, so as to render the fæces more soluble; this, however, but mitigates suffering for a time. Second, the application of astringents and sedatives, as belladonna, zinc, or tannic acid, or any other astringent, as nitrate of silver, to the fissure itself. This certainly will greatly relieve the pain at times, and in young children, and at times even in adults, has been known to cure; but you should not place too much dependence upon it, nor waste time by a prolonged use of these means if you can avoid it. When they act as curative agents, they do so by destroying the exposed filaments of nerve in the ulcer or fissure, and the parts are then put in a state of rest, and then the fissure takes on healthy action and heals.

Our surgical treatment acts just in this way, viz., by putting the parts at rest. This is accomplished by either of two methods: over-distending the sphincter, paralyzing it for a time by means of the fingers; or else dividing the muscle with the knife. I will put in practice on these two patients both these methods, so you will see exactly how it is done, after I have given you a slight description of them.

Both these methods I believe we owe to French surgeons; the division of the sphincter to Boyer, the over-distention to Récamier. Over-distention is now perhaps more frequently done in this city, certainly in this hospital. In doing this we may make use of an instrument that has been devised for this purpose, which is very much like a bivalve speculum, the blades of which are caused to separate either by closing the handles, or by means of a screw. When you use the fingers, which I think are far better, you place your two thumbs well into the rectum so as to include the whole of the sphincter, then, grasping the buttocks with the fingers, you forcibly distend the sphincter as you bring the thumbs against the tuberosity of the ischium. This at first sight may appear a very rough and harsh mode of operating, and is so regarded by some, who, I believe, for this reason denounce it, and again because it has been said to have given rise to undue laceration of the tissues, and troublesome hemorrhage. I have resorted to this means a great number of times, and have never seen any but good results follow. It is true, I have heard of considerable bleeding taking place after its use, and of one case where cellulitis followed. When we use the knife we draw the blade through the centre of the ulcer or fissure, so as to divide the mucous membrane (if it has not already disappeared under ulceration) and some or all the underlying muscular fibre of the sphincter. Whether to divide all or only a portion of the muscle, is a disputed point. That a superficial incision will suffice, in many cases, in relieving pain and curing the disease, I know from personal experience, and it does so just in the same way that a caustic may act, viz., in dividing an irritable or inflamed nerve. Should you desire to be more certain of the result of the operation, a free division of the muscle, thus securing a longer period of rest to the parts, is best, and by many this is always done. Even after either of these methods, in a few days the normal action of the muscle is restored as a rule. I have heard of cases where its normal condition did not return after forcible distention, and patients as a result suffered from incontinence of fæces; they must be extremely rare, else we should have heard more of them. Some have seen fit to combine both these methods, and in some instances it may be of service; thus a few weeks ago, after stretching a muscle as far as I deemed safe, and yet on withdrawing the thumbs it did not appear as if distention had accomplished enough to paralyze or impair its tone, I drew my knife through the fissure, and the result was most gratifying. Both these methods have their strong advocates; they are both excellent and will accomplish a cure. If you operate without either, the knife is the least painful, and if the fissure is but slight and superficial, a slight incision is all that will be required: should the patient (as some always do) have a great dread of the knife, we can effectually relieve them by means of our fingers. Though myself practising over-distention more than incision at present, I am not quite prepared to recommend one method as much superior to the other. In those cases which, for want of a better name, we call neuralgic affections of the rectum, and which often is accompanied by spasmodic contraction of the sphincter, we have a group of symptoms very like those caused by fissure. Yet no ulcer or fissure is detected. In these cases, over-distention of the sphincter is the operation to be practised. With reference to the after-treatment, there is but little to be said. As a rule it is but necessary to keep the patient in bed; but for a few days you had better keep him quiet, preventing him from taking exercise, as walking or standing for any length of time. I have had patients after the operation of incision, or over-distention of the sphincter, resume their ordinary occupation on the following day and no trouble follow. I do not advise you, however, to allow your patient to do so in cases where you can as well prevent it. After the operation, patients as a rule are at once relieved of pain, and are rapidly restored to health. In weak, nervous patients, who have long been sufferers, some little interval will at times elapse before all symptoms which they formerly suffered from will cease; and here you must pay attention to their general condition, such as the use of tonics, proper diet, and out-door exercise. In speaking of the operation by incision, or dividing the sphincter, I omitted to tell you that even if there be more than one fissure present, one incision will suffice, that being sufficient to place the parts at rest. In those cases of perineal fissure in the female, do not be too free with your incision in that direction, else we might have incontinence of fæces follow. This, no doubt, is due to the action of the transverse perineal muscles as well as the other muscles around the vagina which take origin from the perineal centre or body, by their traction keeping the parts from healing. Again, by a too free incision in this locality we may weaken the part which is known in the female, by anatomists, as the perineal body, and upon which the integrity of the female perineum depends.

A New Diaphoretic.—At a meeting of the Société de Biologie, on the 12th of April last, Rabuteau and Couthino made a communication on the subject of jaborandi, a Brazilian plant of the order Rubiaceæ, which has remarkable diaphoretic properties. Rabuteau took forty-eight grains, and fifteen minutes afterwards began to sweat freely, and had copious discharges of saliva. A bitter principle seemed to be the essential chemical constituent of the leaves.—*Berl. klin. Woch.*, 30, 1874.

NOTES UPON CASES PRESENTED AT THE CLINIQUE

OF

S. D. GROSS, M.D., LL.D.,

PROFESSOR OF SURGERY IN THE JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

(Phonographically reported for THE MEDICAL RECORD.)

CASE I.—PERIOSTITIS AND OSTITIS AFFECTING THE ELBOW.

GENTLEMEN: The first case that we are asked to see to-day is this little child, three years of age, who has a tumefaction about the elbow-joint.

There has, doubtless, an effusion of plastic material—lymph, plasma, or fibrine—taken place into the tissues about this joint, and just here it may be of interest for you to know how you are to determine what the character of the material is that has been poured out.

When the material effused is lymph, plasma, fibrine, the tumefaction has a hardness and density readily recognized; but when the tumefaction fits upon pressure, you may be sure that it is due in a great measure to an effusion of the watery portions of the blood; and in addition the inflammation is generally milder than that which furnishes lymph, or plasma, or fibrine. The swelling in this case, as you see, involves the upper part of the forearm and the lower part of the arm. You will also notice that there is considerable discoloration of the skin over the swelling, and I venture to say that there is in this case an affection of the periosteum, and probably also of the outer portion of the bone. It may be that the deeper portions of the bone are also involved. In other words, there is periostitis and ostitis. Whether there is inflammation of the endosteum is a matter which I cannot determine. This is one of those affections which may result on the one hand from accident, and on the other from taint of the system. It is not certain that this child had a fall or other injury, and I assume that it is not the result of an injury. There is, probably, an impending suppurative action here, and when the abscess has discharged, it is probable that we shall find lesion of the bony tissue. I think we may prognosticate that condition of affairs with safety.

As respects the part itself, I shall recommend to have applied to it a strong solution of acetate of lead with laudanum. The laudanum must be used sparingly, because at this tender age it may be more than properly imbibed.

℞. Acetate of lead. .... ℥ ss.
Laudanum ..... ʒ ij.
Water..... Oij.
M.

Apply this upon flannel, and give the child an anodyne powder three times a day as follows:

℞. Dover's powder.....grs. x.
Div. in powders No. viii.

This material will be first introduced by administering a dose of castor-oil. The diet will be restricted to milk.

CASE II.—REDUCIBLE HERNIA.

This child is aged two years and five months, and, as you see, is a stout, healthy fellow.

The mother has noticed a swelling in the right groin and side of the scrotum ever since the child was a month old, which has been growing since that time. It sometimes disappears entirely. The testicle is at the *bottom* of the swelling. The tumor extends as high up as the external inguinal ring. It disappears when the child is asleep, and appears again when he gets up. Upon taxis the tumor disappears very readily, and as it disappears a gurgling noise is heard and sensation felt. The tumor is manifestly a hernia, and reducible.

The testis in scrotal hernia is always situated at the *bottom* of the tumor; and this is of great value in arriving at a diagnosis between this and other affections. Whether this tumor is a direct or an indirect hernia, I am not able to say. The ordinary affection occurring soon after birth is of oblique descent. It is very rarely that we have direct hernia at this age. All that can properly be done in this case is to apply a well-constructed truss; taking care upon the one hand that the spring shall not be too firm, and upon the other hand, too lax and feeble. It must be just strong enough to keep the parts in their proper place, and prevent the bowel and omentum from descending. The child may become restive if too much pressure is given, while a certain amount of pressure must be maintained, being a little above that which is necessary for the retentive apparatus if any benefit is to be realized. The pressure is for the purpose of inviting the effusion of lymph, which shall connect the edges of the opening and in that way lead to permanent and radical cure. At this tender age, if the truss is well constructed and properly worn, with pressure sufficient, we may reasonably expect a permanent cure in almost every instance; whereas in advanced life, say at forty and above, there is no probability of effecting a permanent cure by means of pressure from a truss.

CASE III.—CONGENITAL HYDROCELE.

This child, three months old, has had a swelling upon the left side of the scrotum ever since he was born. The tumor is not soft and gaseous, as was the tumor upon the child that has just been before us.

The testis is *not* at the inferior extremity of the tumor, as in the other case. Pressure does not reduce the tumor. The tumor never disappears, but is sometimes smaller than at other times. When the integument is tightened over the tumor, a certain amount of translucency becomes apparent. This could be more perfectly demonstrated by placing a light between the tumor and a dark background; but the present examination will suffice.

In this affection, which we may call hydrocele, the testis is at the posterior part of the tumor, not below; although there are exceptional cases to this general rule. As a rule, the testis is situated at the junction of the inferior with the middle third of the scrotal tumor, but nearer to the bottom of the tumor than to the upper extremity. In hydrocele the tumor cannot be diminished in size by pressure, as in the reducible hernia. The tumor may vary somewhat in its bulk, depending upon the state of the system and the condition of the absorbent vessels; hence there is occasionally a diminution in the quantity of water that the tumor may contain; but the tumor may be said to remain in the same condition, and gradually increasing in bulk.

The tumor in this case is not conical, as in the other case, but is quite globular; this, however, is a mere accidental circumstance. In a case like this there is no material change in the overlying structures and integument; but in both the hydrocele and hernia there is *usually* considerable stretching of the integument. The spermatic cord is usually felt at the upper portion of a hydrocele without difficulty, and it is only when the tumor extends into the inguinal canal that there is any difficulty experienced in its detection; but in hernia the spermatic cord is posterior to the bowel and omentum, and is usually felt in that position. In hernia we

find also that the tumor is more in the groin than is the case with hydrocele. There is more or less of fluctuation in the hydrocele, whereas in the hernia there is never anything of that kind at all. In the hernia the contents of the tumor feel gaseous because the bowel contains more or less of air; and in the reducible variety there is always a gurgling, croaking noise when the reduction is made. Whenever there is any doubt with regard to diagnosis, the exploring-needle at once relieves that doubt. The best exploring-needle that can be used in these cases is the common sewing needle or a cataract needle.

(At this point a fine cambric needle was introduced, and water oozed from the puncture.)

The fluid which is present in these tumors is perfectly clear, is saline in its taste, and coagulable by heat, alcohol, and acids. It is simply the serum of the blood, and has accumulated in this sac because there was a loss of balance in the secreting and absorbing vessels. In the natural state this balance is preserved, and the vaginal tunic is simply lubricated. Nothing more need be done in way of treatment to-day than the simple puncture that has been made. Several punctures of this kind may occasionally, in cases of recent standing, produce a radical cure. The external applications that may be made, and in many cases with benefit, are quite numerous, and among them the following may be regarded as the more serviceable:

℞ Tr. iodine..... One part.
Alcohol..... Six or eight parts.
M.

Strong solutions of Goulard's extract, or acetate of lead or of alum, are also not infrequently employed.

When the case is obstinate, the best plan of treatment is to traverse the interior of the sac with one solitary, delicate, well-waxed silk thread, and allowing it to remain for a period of eighteen to twenty-four hours; but not longer than twenty-four hours in any case. For, delicate as the operation is, it is forced enough to excite sufficient inflammatory action and effusion of lymph to glue together the sides of the sac.

When the case is cured by means of external applications, it is not unlikely to occur as the result simply of restoration of balance between the secernent and absorbent powers of the vessels.

CASE IV.—CONGENITAL PHIMOSIS.

This boy is three years of age, and has suffered from his present trouble since birth. You will notice that his foreskin is very much lengthened, and at its anterior extremity there is only a very small opening, smaller than the smallest pin's head, for the evacuation of the urine. When, therefore, the child makes water the foreskin becomes enormously distended, the water passing from the penis; but, instead of escaping from the opening, collects in a pouch which is formed by the foreskin around the head of the penis. This tumor is then emptied by a kind of milking process through the nipple-like opening formed by the anterior extremity of the foreskin. Urinary concretions could be very easily formed in this position if the urine chanced to be loaded with uric acid salts or other salts which enter into the formation of urinary calculi.

It is only a short time since I received a communication from one of my former students, who is now practising in China, in which he stated that he had just removed 104 concretions that had formed in one of these pouches.

If this condition of affairs is permitted to remain, the bladder must necessarily suffer from chronic irritation, in the same manner as when there is obstruction to the passage of urine dependent upon the presence of stricture of the urethra or enlargement of the prostate gland; and the bladder also becomes hypertrophied from flux of blood to it and through it. Sometimes there is partial paralysis of the inferior extremities as the result of this form of difficulty. The contraction in these cases that prevents the foreskin from passing over the head of the penis is, as a rule, in the mucous membrane, and not in the skin. The skin is sufficiently loose, and there is usually a redundancy which does not seem to be for any purpose whatsoever.

The only rational treatment for a case of this kind is circumcision. There are some surgeons who advocate indiscriminate circumcision, but I do not belong to that number who are in favor of the indiscriminate operation in this country. The operation in tropical countries is a very proper one, because there it is a matter of great importance that there should be great cleanliness of these parts, and that cannot be observed when the prepuce is long and tight.

Circumcision, therefore, I have not the slightest doubt was instituted by Moses as a religious rite in order to induce the people to resort to it on account of the benefit which they would receive from the operation as a hygienic measure. That was doubtless the motive in establishing the ordinance; but there is no reason why the operation should be resorted to under other circumstances, and, in fact, it is an imputation upon Providence that it should be resorted to when there is no necessity for it.

In performing the operation the mucous membrane must be divided.

When the prepuce is long, the skin only may be removed, and the opening in the mucous membrane increased in size by some other means. Sometimes the object can be accomplished by means of a dilator; but in the main that is not a desirable operation. The *best* manner is to slit the mucous membrane open, and then tack the edges of the skin and mucous membrane together. In many cases, especially in those of long standing, it will be found that the mucous membrane has contracted more or less extensive adhesions to the glans penis. All such adhesions must be carefully broken up at the time the operation is performed, and care taken afterwards that they do not form again.

(At this point chloroform was administered and the operation performed.)

Considerable adhesions are found between the prepuce and the glans penis. The stitches should remain at least one week. Cover the parts with a compress wet in cold water, and over that place a piece of oil-silk. Keep the little fellow quiet in bed. How astonished he will be when he wakes up and sees the head of his penis!

CASE V.—STRICTURE OF THE RECTUM.

This case, gentlemen, is one of interest from the fact that this comparatively young man has had stricture of the rectum for nine years. He is now somewhat over thirty years of age. For about three years he has experienced great difficulty in evacuating the bowels; the desire to evacuate the bowels has been very frequent, and the evacuation has been attended with considerable straining. In consequence of this straining, piles to a moderate extent have been developed. Upon making exploration the obstruction was found about three inches above the margin of the anus. This is the usual situation, the ordinary limits being between two and a half and three and a half inches above.

This stricture usually begins upon one particular portion of the circumference of the bowel, and gradu-

ally extends until, in most cases, it sooner or later involves the entire periphery of the tube; and in proportion as it extends it encroaches on the calibre of the tube.

In this case the discharges are about the size of an ordinary cigar; sometimes cylindrical and sometimes flattened; and from six to twelve discharges occur within twenty-four hours. The great number of discharges is owing to the fact that the bowel above the stricture is not relieved of its contents, and instinctively, if the expression may be allowed in a surgical connection, the bowel takes on contraction to rid itself of its contents, accumulated in consequence of the tightness of the stricture.

When a patient comes and complains to you that he has difficulty in voiding his fæces, and also says that it comes away in compressed and cylindrical form; that it is not infrequently tinged with blood, or that it is covered with mucus of a bloody character, or mucus and pus, you may at once suspect the existence of an affection of this kind. Then, in order to satisfy yourselves with regard to the existence or non-existence of the affection, you must make an examination, and the proper instrument to be employed for this purpose is the finger. Oil the finger well, and when introducing it, give it a rotating, boring movement, and you will give your patient no pain; whereas, if you push the finger directly up through the sphincter, the patient will complain of intense pain. This is an item well worth your recollection.

The finger being introduced, you have something by which you are enabled at a single examination to determine the distance of the stricture from the margin of the anus, its consistence, the size of the opening in the stricture, and the extent of the stricture so far as the circumference of the bowel is concerned. Having ascertained these points, knowing the nature of the disease, the question next arises, Is the stricture an ordinary one, such as occurs in other canals, or is it specific in character, the result of epithelioma?

There is an interesting point with reference to this case, and that is with regard to age. I have seen stricture of the rectum at the ages of twenty, twenty-four, twenty-six, and twenty-seven in quite a large number of cases, which is comparatively early in life, when compared with the occurrence of the same affection in other parts of the body; and here, again, as I have already remarked, we have the occurrence of this affection in a comparatively young man.

Another point of interest in the case is the duration of the disease. In very many cases it lasts a great length of time, and perhaps the patient may die of some other affection. In some cases it is chiefly an inconvenience, and that is all.

When this case first came under observation, the stricture was exceedingly tight. The patient was placed under the influence of chloroform, and the dilatation first made with the finger. In a case of this kind the finger is the only proper dilator to be employed. Instruments may be used, but the finger is much more serviceable, because much more safe. It is sufficiently long and delicate, and answers an intelligent purpose.

Afterwards, when some degree of dilatation has been accomplished by means of the finger, it may be carried on by means of gum-elastic dilators, made especially for the purpose. These instruments, however, must be used with the greatest care, lest permanent injury be done.

A spermaceti candle may be used for the same purpose, in case no instruments for dilating are at hand.

While the process of dilatation is going on, the frequency of the discharges may be arrested during the night by giving the patient a suppository at bedtime, consisting of one-third of a grain of morphine rubbed up with cacao butter.

Dilatation in this case has been carried on to such an extent that the frequency of the passages has been very much diminished, and the passages are had with comparative comfort.

Original Communications.

NOTES ON OPHTHALMIC PRACTICE.

EXTRACTS FROM A PAPER READ BEFORE THE KINGS COUNTY MEDICAL SOCIETY, AUGUST 18TH, 1874.

BY ARTHUR MATHEWSON, M.D.,

BROOKLYN, N. Y.

THE USE OF THE SALTS OF LEAD IN EYE-WASHES.

1. THE use of the salts of lead as local applications to the eye. It is nothing new that these salts form insoluble precipitates when exposed to the action of the secretions of the eye, and that where there is abrasion of the surface of the cornea from wounds or inflammatory process the use of these agents may lead to the formation of opaque white patches, which disfigure the beauty of the eye, and when they lie before the pupil interfere with vision. Most of the modern writers on the eye refer to these lead deposits on the cornea, and some of them caution against the use of lead applications in case of corneal ulcer; yet nearly all speak of preparations of the acetate of lead among others to be used in a class of cases in which ulcerations are most likely to occur. Thus Soelberg Wells, author of the standard English work on diseases of the eye, speaking of the treatment of phlyctenular ophthalmia, of acute and chronic granular ophthalmia, and of chronic granulation, recommends acetate of lead applications. On page 71 he says: "But if any infiltrations or ulcerations of the cornea exist, the acetate of lead should never be used, as it will be precipitated upon the cornea and give rise to very marked stains." On page 77, after recommending acetate of lead along with sulphate of copper, and nitrate of silver, in the treatment of chronic granulations, he says: "Great care must be taken never to order any preparation of the salts of lead if there is any abrasion of the epithelium of the cornea, or any ulcer of the latter, as it will produce an indelible lead stain." As if in these diseases ulcerations and abrasions of the surface of the cornea, though not at first presenting, were not constantly liable to occur, so that no care likely to be taken will prevent the liability to the formation of these indelible lead stains. Abrasions of the cornea are not only liable to occur in these diseases but are easily overlooked, and may not in every case be readily detected except by the use of a lens and oblique illumination, and in this way the danger of lead stain becomes still greater. That this danger is not merely theoretical, my own frequent experience has taught me. Nothing is more common, especially in hospital practice, than to have patients present themselves with a white patch on the cornea, which is recognized as a lead deposit—perhaps just before the pupil, and abolishing all useful vision—the history of the case being that the patient, having an inflamed eye, got a prescription from a physician, very likely without any caution as to its use, or a wash from the nearest druggist, or somebody's "Eye-water." The

inflammation may have passed away, but the application used to relieve it has left its mark forever. Or the patient may have used the remains of a lotion prescribed for some former trouble, in which there was no abrasion of the cornea, in some subsequent attack in which abrasion did occur, with a lead stain as a result. Or, as often happens, a patient gives to a friend, suffering from what seems to him the same trouble, the wash which has afforded relief to his own symptoms, but does that friend an irreparable injury. Another frequent and provoking experience is, that a patient with some chronic affection of the conjunctiva, though frequently told from the first of the obstinate nature of the disease, gets discouraged and disappears for a time, to return with a disfigured cornea, the result of using a lead-wash obtained on a physician's prescription, or the gift of some officious friend.

I go into these details of my experience of the evil results of the use of a popular prescription, sanctioned by the authority of some of the best-known writers, to show how liable such accidents are to occur, and to justify my opinion that lead applications to the eye should be wholly discarded, and the public be taught to look upon them as dangerous. Certainly there is no necessity for using this remedy when there are so many others equally good, and their use unattended by such dangers. Williams, of Boston, is the only authority I have consulted who takes this common-sense view of the matter.

TATTOOING FOR OPACITIES OF THE CORNEA.

In connection with the subject of opacities of the cornea I will refer to a means of relieving the disfigurement some forms of opacity produce, which may be justly regarded as one of the most valuable recent improvements in ophthalmic practice. Patients sometimes present themselves with a dense white opacity of the cornea, causing an ugly deformity—anxious that a blemish which affects so much there *amour propre*, and it may be their prospects in life, should be removed, and willing to undergo any suffering for that purpose. Formerly there was nothing to do but to send them sorrowing away with no hope of relief except in the somewhat objectionable procedure of enucleation and substitution of an artificial eye, which, however, was sometimes readily submitted to. Now, thanks to the suggestion of coloring the whitened cornea by the process of tattooing, such applicants may be encouraged with the hope of speedy relief. To Wecker, of Paris, is due the credit of suggesting this idea and introducing it successfully into practice. The process is simply to apply a paste of India ink over the whitened portion of the cornea which it is desired to color, and prick it under the surface with a bundle of needles.

As a case illustrating the method of performing this operation and its results I may cite that of Miss E. S., who two years ago, by the slipping of a carpet stretcher, received a severe wound of the left eye, the notched edge of the tool cutting completely across the cornea, and lacerating the iris and lens. Though the wound was so extensive the inflammatory reaction finally subsided, leaving the eye scarcely at all shrunken, but without sight and with the disfigurement of a broad, staring white cicatrix, occupying the entire horizontal diameter of the cornea. What made this blemish all the more noticeable, and the trial harder for the patient, was the fact that her eyes were remarkably large, dark and beautiful. She eagerly accepted the proposal to remove the deformity by tattooing. The tinting was accomplished at two sittings, the first March 31st, 1874, and the second April 17th, it being thought best, as the eye had been left in a somewhat delicate condition, by the wound extending back toward the ciliary region, to avoid the risk of exciting morbid action by too thorough an application at one sitting. She complained of considerable pain during the operation, but bore it bravely without an anæsthetic, sitting in a high-backed chair, with the head thrown back, the upper lid raised by a broad elevator in the hands of an assistant, the lower depressed, and the eye "chocked" by the fingers of the left hand of the operator, who, sitting in front of the patient, pricked in a paste of India ink, applied over the cicatrix with a camel's-hair brush, by twenty or twenty-five gentle strokes with a bundle of a dozen fine sewing-needles bound together with a waxed thread. These were directed obliquely against the cornea with just sufficient force to penetrate the outer surface of the cicatrix. The lids were kept separated for a short time, that the pigment might not be too soon washed or brushed away. The irritation consequent on the operation mostly subsided in two or three days, during which time the patient was kept in a shaded room and a solution of atropine dropped in the eye three times a day, these precautions being taken on account of the delicate condition of the eye. The coloring matter used on the first occasion was the ordinary India ink rubbed with water into a paste of sufficient consistency not to run off the parts where it was applied. At the second sitting the liquid preparation of India ink, by Winsov and Newton was used, as being more soft and smooth and less likely to irritate mechanically. This was dried so as to form a paste. The result at the time of writing (August 17th) is an apparently permanent coloring of the cicatrix, which completely removes the former staring deformity, and produces an effect very satisfactory to the lady and her friends.

Where the whole cornea is opaque and white, the best cosmetic effect may be produced by tattooing a circular spot at its centre to represent the pupil. I have seen a case of Dr. Agnew's in which the resemblance to a normal pupil surrounded by a light gray iris produced in this way was so close as to deceive ordinary observation.

While thinking of this matter of concealing discolorations of the cornea by tattooing, it has occurred to me that the same principle might be applied to the relief of disfigurements of the face and neck, such as those produced by extensive nævi or other permanent discolorations of the skin, some coloring material being used which would produce a natural flesh tint. A subject with a discoloration of some part ordinarily concealed by the clothing would be a proper one for experiments in this direction.

HYPODERMIC INJECTION OF STRYCHNINE IN FAILING VISION.

I close this paper with some remarks on an important contribution ophthalmology has made to hypodermic therapeutics, which, though some articles on the subject have appeared in the medical journals, is not as widely known or so fully appreciated as it should be. I allude to the subcutaneous injection of strychnine in cases of failing vision from atrophy of the optic nerve and some other diseases of the eye. Such cases had hitherto seemed almost hopeless, as long experience had demonstrated them to be under all previously tried methods of treatment. Strychnine, administered by the usual methods, had been often employed, but usually without marked benefit. In 1871 Prof. Nagel, of Tübingen, came out with a series of cases of amaurosis treated by hypodermic injections

of nitrate of strychnine, in which the results stated were so marvellous as to seem incredible. Since that time numerous observations have confirmed the accuracy of his statements, and though there are many cases—the majority perhaps—in which there is no good effect obtained, nearly every one who has given this method of treatment a fair trial has been astonished in some cases in which the sight had been constantly failing under other treatment, and total blindness imminent, to find strychnine injections followed by sudden and most marked improvement. Brown-Séquard has shown by experiment the effect of strychnine in increasing the "reflex power" of nerve-cells when applied directly to the spinal cord, and it seems as if this agent acted more directly and powerfully on the nerve elements when administered hypodermically than when introduced into the system by the stomach. It is only rational to suppose that the influence of the stomach and its varying contents on many medicines must greatly modify their effect on the system, and have much to do with that uncertainty of action which we all have at times so much reason to regret. It is my belief that hypodermic medication is as yet only in its infancy, and that for a large class of drugs, when we wish to get their most rapid, certain, and unmodified influence, we shall administer them by this method, and that the science of medicine will thereby gain much in positiveness and accuracy. However this may be, my own experience has convinced me that in some cases of failing sight from diseases of the optic nerve and retina, strychnine injected hypodermically has a peculiarity and power of action that it never has when administered by the mouth in safe doses. A few cases from my note-book will serve to illustrate.

J. H. R., æt. 32, book-keeper—first seen Dec. 11 in 1873, when he stated that ten weeks before, his vision began to be impaired and had gradually diminished since. At the time of examination, vision was $\frac{1}{10}$ in the right eye, and $\frac{1}{10}$ in the left, the field of vision was considerably narrowed toward the nasal side in each eye. Ophthalmoscopic examination showed a paleness of each nerve on its temporal side. Though the patient had used tobacco and alcoholic stimulants freely, his general health was apparently not much affected. Nitrate of strychnia gr. $\frac{1}{30}$ was injected under skin of right temple. Not much immediate effect was produced. He was ordered to discontinue use of rum and tobacco, and to take a pill of $\frac{1}{30}$ gr. sulphate of strychnia three times a day. On Dec. 13th vision was $\frac{1}{10}$ on the right, $\frac{2}{3}$ on the left. Nitrate of strychnia gr. $\frac{1}{25}$ was injected into left temple, and within *fifteen minutes* vision rose to $\frac{1}{2}$ on the right and $\frac{1}{2}$ left. Dec. 16th, V = $\frac{1}{2}$ right, $\frac{1}{2}$ left, and after injection of $\frac{1}{25}$ gr. strych-nitrate rose speedily to $\frac{2}{3}$ right, and $\frac{2}{3}$ left. Dec. 22d, vision remains the same, having thus risen from $\frac{1}{14}$ in the right eye to $\frac{2}{3}$ in less than eleven days.

Another similar case was that of J. H. S., æt. 33, broker, who had been using stimulants and tobacco in excess for a long while, and at the time of his presenting himself, May 22, 1874, was quite tremulous. He had noticed that his sight was failing for two or three months. V = $\frac{1}{2}$ in each eye. Ophthalmoscope showed a hyperæmic and hazy condition of each fundus oculi. This case, like the last, presented the general features of what is known as tobacco amaurosis. Injection of $\frac{1}{30}$ gr. nitrate of strychnia was followed by a slight immediate improvement. May 27th, vision was found to have risen from $\frac{2}{3}$ to $\frac{3}{3}$ on the right, and from $\frac{2}{3}$ to $\frac{2}{3}$ on the left. In these two cases it might be claimed that the removal of the exciting causes of the disease, that is, abstinence from tobacco and stimulants, had much to do with the result. But that could not account for the sudden increase of vision which followed the injections, and experience has shown that it is not alone sufficient. Dr. Edward Curtis reported, at a meeting of the New York Ophthalmological Society last winter, a case in which entire abstinence for a considerable time had no effect in improvement of vision, but this followed at once strychnine injections.

A case illustrating the power of these injections, in a somewhat different condition, is that of D. C., stevedore, æt. 49, who came to the Brooklyn Eye and Ear Hospital, January 3d, 1872, with history of failing sight of both eyes for three months. He had received a blow on the forehead from a falling box, and from this accident dates the failure of sight, which was so great at the time of his admittance that he could barely count fingers at the distance of three feet. The field of vision was very limited. The ophthalmoscope showed marked atrophy of both optic nerves. He was treated by hypodermic injections of *sulphate* of strychnia in the temples, gr. $\frac{1}{33}$ to gr. $\frac{1}{25}$, repeated daily most of the time till February 19th, when the vision of the right eye had risen to $\frac{20}{40}$, or one-half normal vision, and more than ten times the amount he had when treatment was begun. On one occasion vision rose from $\frac{20}{100}$ to $\frac{20}{70}$ within ten minutes after the injection.

In two cases of glaucoma, referred to at a former meeting of this Society, injections of strychnia, following iridectomies, were of marked service in hastening improvement of vision. One of these was a most remarkable case. A young woman, about 20 years of age, was affected with pure primary glaucoma, non-inflammatory, and chronic in its course. One eye was lost, and in the other sight had diminished to the faintest perception of light, at which it remained for many months, in spite of two broad iridectomies, one above and the other below. Finally, an injection of strychnia, employed rather as a placebo than with any hope of its affecting the sight, produced so marked an effect that I was encouraged to repeat it, with the surprising result, within a few weeks, of vision enough to count fingers at the distance of six feet. This patient, Sarah Calders, is still an inmate of the Brooklyn Eye and Ear Hospital.

I would not be understood as advancing the theory that strychnia can take the place of iridectomies in the treatment of glaucoma, but only claim that it may act, as these cases show, as a useful adjunct.

As to the details of administration, I usually employ a solution of nitrate of strychnia gr. iv. to aq. destillat. fl. ℥ i.; each minim thus containing $\frac{1}{100}$ gr.; and with an adult patient begin with the injection of three minims or $\frac{3}{100}$ gr., and gradually increase the amount till $\frac{1}{17}$ gr. is injected every day, or every other day, unless some effect is obtained by the smaller doses, or constitutional symptoms, such as stiffening of the limbs or staggering gait, warn that the limit of safety is reached. I have never seen any injurious effect produced, though I have used it daily for weeks at a time, sometimes pushing the amount up to more than $\frac{1}{4}$ gr. at each injection. The injections are made under the skin of the temple or arm—preferably at the former place. I have found that it is not well to trust, without trial, the marking of the ordinary hypodermic syringes, as they vary much, and advise that each one, before use, be carefully compared with some reliable minim measure, so that in employing so powerful a remedy the physician be as certain as possible of the exact amount he is administering.

Reports of Hospitals.

ROOSEVELT HOSPITAL, N. Y.

REPORTS OF PRACTICE AND PECULIARITIES IN TREATMENT.

SURGICAL DIVISION.—DR. BLAUVELT, HOUSE-SURGEON.

FISTÚLA IN ANO.

A CASE of this affection had been treated by the application of the india-rubber ligature. It remained in position five days. At the end of that time the cutting was nearly completed. The ligature, in consequence of the excruciating pain which its pressure occasioned, was removed, and the operation completed with the knife.

SPONGES.

Sponges have been excluded from the surgical wards. This was done for the purpose of eliminating every possible means of transmission of septic material from one patient to another. Cotton waste is now employed for wiping purposes, and when an open wound or ulcer is cleansed, the *waste* used is immediately destroyed, never being employed upon the second patient.

BURNS.

The following prescription has been employed, and its use has been attended with very gratifying results.

℞. Tannic acid.....ʒi.
Chloroform .....gtt. xx.
Simple cerate.....ʒi.
M.

Spread upon lint and cover the parts affected.

Glycerine and bismuth have also been somewhat employed of late, but with the result of producing terrible smarting when first applied, usually continuing for an hour or more.

Bismuth and glycerine are united in such proportions as will give a creamy paste which can be conveniently spread upon sheet lint. It is possible that the glycerine was impure, or the bismuth was not an impalpable powder, or both circumstances may have united in producing an inordinate amount of local irritation.

When the burn is deep, such dressings are employed as may be of service in assisting the separation of the slough; when the slough has separated, the excavation is treated as an open ulcer.

ULCERS.

Several ulcers were noticed which presented a remarkably healthy appearance that had been produced by the application of Hay's lotion.

Ulcers are dressed in a particular manner; a piece of sheet lint is cut of the exact size and shape of the ulcerating excavation, it is then wet in the lotion and placed in the ulcer; then a piece of oil-silk is cut of the exact size and shape of the piece of lint, perhaps a trifle larger, and is laid over the lint; the whole is then secured with a woollen bandage. This method has an advantage of being cleanly, which is important.

POPLITEAL ANEURISM.

An interesting case of this kind was seen in which the remedial measures adopted had been attended by an apparent cure. Pressure was the chief means employed. It was at first resorted to for the purpose of guarding against rupture until time could be obtained to perform an operation. The benefit arising from the pressure was so marked that it was steadily maintained for four days. At the end of this time all pulsation in the tumor had ceased. Digital pressure was kept up during the day at a point in the upper third of the thigh. During the night pressure was kept up by means of an instrument with a double pad so arranged that pressure could be made with the pads alternately. The pads were alternated every hour, and pressure made at a point near the junction of the lower with the middle third of the thigh. In this manner the most desirable portion of the artery for an operation was reserved with the tissues overlying it in an undisturbed condition, in case the operation became necessary. Some symptoms of suppuration of the sac had been developed, but, under the influence of continued rest, and the constant application of cold by means of bladders of ice, they had almost entirely disappeared. The patient was a man thirty-four years of age. There was no history of syphilis in the case.

AXILLARY ANEURISM.

The tumor had been of good size, and pulsation could be distinctly felt in the axillary space. Suddenly brachial and radial pulsation ceased. The tumor soon began to diminish in size, and its pulsation had also markedly diminished.

It seemed that nature had in some manner performed the distal operation, and the prospect was fair that her operation would prove successful.

PARALYSIS CAUSED BY PRESSURE OF THE INDIA-RUBBER CORD USED IN THE BLOODLESS OPERATION.

A young man had had an operation performed upon one of his arms in which Esmarch's apparatus had been applied.

Paralysis of motion followed, and the visiting surgeons and other competent observers were of the opinion that it had been caused by the pressure made upon the nerves in the application of the rubber cord. Paralysis remained for about one month. Motion was being gradually restored.

EPISCOPAL HOSPITAL—PHILADELPHIA.

MEDICAL DIVISION—DR. REED, HOUSE-PHYSICIAN.

FACIAL ERYSIPELAS.

ERYSIPELAS had been in the hospital to quite an extent. For local application: saturated solution of *sulphite* of soda. Constitutional treatment: ℞. of iron gtts. xx. every two hours during the day; and gtts. xxx. every three hours during the night; quinine, grs. xvi. during twenty-four hours, in doses of two grains. A most terrible-looking case of what was denominated "erratic erysipelas" was seen in a patient far advanced in phthisis. Extensive phlegmonous inflammation of the scalp had been developed. The patient was doing remarkably well under the influence of the soda dressing, iron, quinine and milk punch, of which latter tonic as high as ʒxl. had been administered during twenty-four hours.

ACUTE ARTICULAR RHEUMATISM.

Treatment essentially alkaline, with dry cotton to the joints.

One case, *sub-acute* in character, was noticed in which there was cardiac complication (endocardial). The treatment instituted consisted in the administration of digitaline in granules $\frac{1}{60}$ of a grain each, to quiet the action of the heart. The results obtained were satisfactory. Iodide of potassium also was used in doses of gr. xx. t i. d.; and the joints were painted with iodine tr.

CHRONIC BRIGHT'S DISEASE.

Basham's tincture is always administered. It is the liq. ferri per acetatis, and the formula for its preparation has been given in connection with the reports from Pennsylvania Hospital. The bowels are kept moderately loose by a senna mixture. Diet nourishing. The hot air or vapor-baths are rarely employed when dropsy is present; hydragogues are very much relied upon.

ACUTE PHTHISIS.

Syr. iodide of iron and cod-liver oil are remedies most commonly used. General hygiene and dietetic treatment is carefully observed.

NIGHT SWEATS OF PHTHISIS.

Sulphuric-acid lemonade and hot-sponge baths have been the most successful in controlling this symptom. Atropia, or ox zinc, has not been used.

HÆMOPTYSIS.

Gallic or tannic acid is commonly administered.

PNEUMONIA.

Carbonate of ammonia is administered in five-grain doses every two hours from the beginning. It is employed for its stimulating and supporting influence.

A poultice of flaxseed meal is invariably applied to the chest, and covered with oil silk when so ordered for some special purpose, such as increased diaphoretic or soothing effect when considerable pleurisy is present. Turpentine stupes are employed when the pain in the chest is severe. Diet sustaining.

CEREBRAL CONGESTION.

The case was one where the man had received a blow upon the head, and had had epileptiform convulsions. There were present symptoms which were regarded as evidence of *cerebral congestion*. And for the relief of this congestion, fl. ext. ergot was administered as an experiment, having never before been used in the hospital for that purpose. It had just been prescribed in drachm doses, and no effect had been produced when we were present.

CHRONIC CARDIAC DISEASE.

The patient was an old lady who had had valvular disease of the heart for some years, but now was particularly distressed by harassing cough, palpitation, and pains through the chest. The patient was made comparatively comfortable by using tr. digitalis in ten-drop doses three times a day; Hoffman's anodyne to allay cough and distress, and turpentine stupes to relieve local pain.

CAPILLARY BRONCHITIS.

The patient was a girl ten years of age. The poultice employed in the treatment of pneumonia was applied to the chest, and carbonate of ammonia and serpentaria administered internally. Patient was convalescent.

ACUTE PERITONITIS.

The opium plan of treatment is the one regularly adopted.

TYPHOID FEVER.

Treatment mainly expectant. Diet liquid. Do not use stimulants, as a rule, until pulse indicates them. Turpentine stupes, if tympanites is present. Hemorrhage from bowels is treated by gallic acid in twenty grain doses every two hours. In cases of actual or suspected perforation opium is relied upon.

SURGICAL DIVISION.

These wards were visited with Dr. Forbes, one of the attending surgeons.

ESMARCH'S APPARATUS.

While adopting this method of controlling hemorrhage during operations, the tourniquet is used instead of the rubber tubing and its attachments, according to the original plan. The tubing had slipped upon one occasion, permitting a fearful hemorrhage, since which time the tourniquet has been substituted.

In the hospitals in New York City a small rubber cord—perhaps $\frac{3}{8}$ of an inch in diameter—is made to encircle the limb from two to five times and then tied. It is thought to be more convenient than either tourniquet or tubing. One case of local paralysis, however, has been produced by the rubber cord. (*Vide* Roosevelt Hospital Report.)

PERMANENT DRESSING OF FRACTURES.

Permanent dressings, such as plaster-of-Paris, etc., are not employed in the treatment of fractures in this hospital.

FRACTURE OF THIGH.

A case of this sort was being treated by simple extension and counter-extension. It is a method very commonly adopted. Place the patient upon a firm bed, apply counter-extension and then extension, by means of weight and pulley, sufficient to retain the proper length of the limb. Long sand-bags are placed along either side of the limb, to give lateral support, and sometimes light lateral splints are applied to the thigh if the muscles are disposed to be convulsive.

Desault's splint is considerably employed in the treatment of this class of fractures.

The "bran-box" is employed very commonly in the treatment of fractures. This is especially true of the compound variety. The fracture-box has sufficient of bran laid upon the bottom to afford a soft bed for the limb; the limb is placed upon it, properly attached to the foot-board; then the sides of the box are closed and the box filled with bran, which can be made to maintain the requisite amount of lateral pressure by packing it pretty firmly at opposite points along the line of the limb.

COMPOUND FRACTURE OF HUMERUS, WITH RUPTURE OF URETHRA.

This patient, a man of middle age, had fallen from a scaffolding and received the injuries indicated. An angular splint was placed upon the anterior surface of the forearm, and extended somewhat above the elbow; upon the outer and posterior surface of the arm a heavy splint of binder's board, with a shoulder-cap, was applied, and the whole secured with a bandage. The wound had been partially closed by sutures, and a large portion of the arm was covered with lint thoroughly wet in laudanum, covered with waxed paper, and then secured with a bandage.

A catheter was placed in the urethra, and retained by means of adhesive plaster. Considerable tympanites had been developed, with considerable abdominal tenderness; wet caps were applied above the ilium with apparent relief from several threatening symptoms.

CHRONIC ULCERS.

Iodoform, strapping with adhesive plaster, grafting,

and various local applications according to circumstances, constitute the treatment usually adopted for this class of cases.

ERYSIPELAS.

Erysipelas had also been present in the surgical wards for some time. Local applications consisted of slippery-elm mucilage, and oxide of zinc ointment. The elm-mucilage is most commonly used, especially in the early stages of the disease. Constitutionally, the treatment is eminently supporting.

CHANCROIDS.

In general, these fellows are cauterized, and then treated as a common open ulcer.

EXSECTION OF THE KNEE-JOINT.

A couple of cases of this kind were seen. The patients were children. The cases were doing well. Several exsections of the knee-joint had been made within a year, and all had done well.

EXSECTION OF HIP-JOINT.

Five cases of exsection of the hip-joint had occurred in the hospital within a year and a half, and all of the operations had been attended with good results.

FRACTURE OF TARSUS.

The injury was produced by a railroad car. All the bones of the tarsus had been crushed except the os calcis. Nearly all the arteries leading to the foot had been ruptured, all the main arteries at least. The patient refused to have amputation performed. Amputation was recommended for two reasons: first, there was scarcely any hope of saving the foot, and permitting it to remain would seriously jeopardize the patient's life; second, if the foot should be saved, it would, in all probability, be a cumbersome and almost useless member, and probably require amputation at some future date. Pirogoff's operation was proposed, being decidedly in favor over Syme's.

The parts were restored in position as well as possible, the foot placed in a bran-box and dressed with lint wet in laudanum for the purpose of restoring vitality. Twelve hours after the receipt of the injury the toes were warm, and the patient again decided, "because the foot was so comfortable," that he would not have it removed.

STONE IN THE BLADDER.

The patient had just been admitted. The symptoms indicated explorations for stone in the bladder. Patient was *etherized*, and a stone *readily* detected with the sound. Upon inspecting the perineum, the cicatrix from a former operation was found. The feet of the patient were considerably swollen. He was placed upon a course of preparatory treatment, as follows: first, a bath, then good diet, porter, tincture of iron, grs. x. of iodide of potassium twice daily, and a mild infusion of buchu and uva ursi. Belladonna was to be applied to the old cicatrix for the purpose of softening it somewhat if possible. After a few days the urine was to be analyzed for the purpose of determining what ground the patient stood upon. The doctor remarked, that generally he performed the operation, using a staff with the groove upon the under side, and a scalpel. Other operations were well adapted to certain cases, but, as a rule, he preferred the operation indicated.

ARTICLES IN OUR EXCHANGES.

ANATOMY AND PHYSIOLOGY.

Contributions to the histology and pathological anatomy of the sympathetic nerve system. LUBIMOFF. *Virchow's Archiv*, lxi., 2, 1874.

The accessory glands of the sexual organs. LANGERHANS. *Ibid.*

Structure of the spongy substance of bones. *Ibid.*

Transfusion of water in the capillaries under blood pressure. KOERNER. *Allg. Wien. Med. Ztg.*, 33, 34, 1874.

Artificial paralysis of the diaphragm. ALYSCHEWSKY. *Berl. klin. Woch.*, 35, 1874.

Structure of hyaline and reticular cartilage. COLOMIATTI. *Riv. Clin. d. Bologna*, May, 1874.

Displacement of abdominal viscera and mobility of liver. MARINO. *Ibid.*

Anomalous cerebellum of a cretin. VERDELLI. *Ibid.*

The formation of glycogen in the liver. SALOMON. *Virchow's Archiv*, lxi., 3, 1874.

Regulation of heat in the human body. RIEGEL. *Ibid.*

SURGERY.

Remarks on decubitus. BETZ. *Memorabilien*, 5, 1874.

Fractures and their treatment. SCHWAB. *Ibid.*, 6, 1874.

Case of traumatic emphysema. KALLIWODA. *Allg. Wien. Med. Ztg.*, 35, 1874.

Four cases of transfusion in men. KLINGELHÖFFER. *Berl. klin. Woch.*, 34, 36, 1874.

Transfusion. TREPPER AND NAGEL. *Ibid.*

A case of phthisis, successfully treated by inhalations and transfusion with lamb's blood. (Conclusion.) BRUGELMANN. *Ibid.*

Partial amputation of tongue by the galvano-cautery. PERUZZI. *Il Raccogl. Med.*, July, 1874.

Report of the autopsy of a man from whom the parotid had been removed in 1869. MARCACCI. *Lo Sperimentale*, Aug., 1874.

Amputation of shoulder by the elastic ligature. SILVESTRI. *Gazz. Med. Ital. Prov. Ven.*, July, 1874.

Internal hemorrhoidal tumors. MORELLI. *Il Morgagni*, May, 1874.

Luxations of the shoulder. FIORANI. *Gaz. Med. Ital. Lombard.*, July, 1874.

Tracheotomy for croupous laryngitis. PAOLUCCI. *Bull. del Sci. Med.*, June, 1874.

Transfusion of sheep's blood. BERRUTI. *L' Independente*, June, 1874.

The elastic ligature in amputations. SETTINI. *Il Raccogl. Med.*, June, 1874.

Amputation of the tongue for epithelioma, by the galvano-cautery. MAIOCCHI. *Arch. d. Med. Chir. e Igiene*, April and May, 1874.

Subcutaneous injection of blood in comparison with transfusion. CAMERER. *Med. Corr.-Blatt*, 30, 1874.

PATHOLOGY AND PRACTICE OF MEDICINE.

Three cases of intestinal obstruction successfully treated by inflation of the bowels with air. BOETTGER. *Memorabilien*, 5, 1874.

Development of scirrhous cancer of the breast. WOLFFBERG. *Virchow's Archiv*, lxi., 2, 1874.

Experimental observations on the waxy degeneration of the striated muscular fibres. WEIHL. *Ibid.*

The connection between stenosis of the aorta and parenchymatous disease of the kidneys. ZIELONKO. *Ibid.*

Glioma of the substantia perforata. NEUMANN. *Ibid.*

Dipteric infection (diseases produced by the dipteræ, such as flies, fleas, gnats, and the like). WEISER. *Allg. Wien. Med. Ztg.*, 36, 37, 1874. (Continuation.)

On Cheyne-Stokes' respiratory phenomenon. FILEHNE. *Berl. klin. Woch.*, 35, 1874.

Remarks on giant-cells and their relation to tuberculosis. FRIEDLAENDER. *Ibid.*, 37, 1874.

Appearance of the tænia mediocanellata in Berlin. ROBINSKI. *Ibid.*, 37. 1874.

Differential diagnosis between the tænia solium and tænia mediocanellata. FRITSCH. *Ibid.*

Polyuria. KAURIN. *Norsk Mag. f. Laeg.*, Aug., 1874.

Primary tuberculosis of the uro-genital organs. BANG. *Hospitals Tidende*, Sept., 1874.

Communication between the duodenum and the right ureter. *Ibid.*

Treatment of epidemic diphtheria. CASTRUCCI. *Lo Sperimentale*, August, 1874.

Vegetative endocarditis, with multiple embolism. GATTI. *Ann. Univ. d. Med*, July, 1874.

On tænia. MAI. *Gazz. Med. Ital. Lomb.*, July, 1874.

Eclampsia from a vertebral lesion. BARRELLI. *Riv. Clin. d. Bologna*, May, 1874.

Case of intestinal occlusion. ROMITI. *L'Imparziale*, July, 1874.

Pseudo-membranous bronchitis. GENERALI. *Lo Spallanzani*, June, 1874.

Diphtheria in Tunis in 1872-3. FERRINI. *Lo Sperimentale*, July, 1874.

Prophylaxis and treatment of diphtheria. MARCHIONNESCHI. *Ibid.*

Cells and parasites in pathology. SANGALLI. *Gaz. Med. Ital. Prov. Ven.*, June, 1874.

Sarcoma. MAZZONI. *Arch. d. Med. Chir. e Igiene*, April and May, 1874.

Keratitis again. (Reply to Boettcher on the inflammation question). COHNHEIM. *Virchow's Archiv*, lxi., 3, 1874.

The changes in muscular tissue in infectious diseases. POPOFF. *Ibid.*

On the theory of the origin of metastases in tumors by embolism. ANDRÉE. *Ibid.*

Infection by inhalation. FALGER. *Ibid.*

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Atresia of the cervical canal of uterus after instrumental delivery. VALSUANE.

Clinical note on intra-vaginal auscultation. MAYER. *Il. Morgagni*, May, 1874.

Uterine hemorrhages. *Giorn. d' Ostetr. e Ginecol.*, July, 1874.

On the artificial food of children. KRAUSS. *Med. Corr.-Blatt*, 30, 1874.

Drainage of the abdominal cavity. HAHN. *Berl. klin. Woch.*, 38, 1874.

Pelvic abscess without symptoms. PANTHEL. *Ibid.*

MATERIA MEDICA, THERAPEUTICS, AND TOXICOLOGY.

Treatment of diarrhœa. HARTSEN. *Virchow's Archiv*, lxi., 2, 1874.

Cundurango bark and its therapeutic application. RIEGEL. *Berl. klin. Woch.*, 35, 36, 1874.

Strychnia poisoning. LANGE. *Hospitals Tidende*, September, 1874.

Action of quinine on the system. CHIRONE. *Lo Sperimentale*, August. 1874.

Experimental studies on the medical uses of cantharides. CANTIERI. *Lo Sperimentale*, July and August, 1874.

Effects of alcohol on the system. ZAPPULLA. *Lo Salute*, July, 1874.

Oxalic acid in diphtheria. CENNI. *Lo Raccogl. Med.*, June, 1874.

Chloromethyl and chloroform. SAENGER. *Berl. klin. Woch.*, 38, 1874.

NERVOUS DISEASES.

Idiocy in consequence of epilepsy cured by large doses of bromide of potash. GÁJÁSY. *Allg. Wien. Med. Ztg.*, 34 and 35, 1874.

General electrization and central galvanization. ARTENS. *Allg. Wien. Med. Ztg.*, 34, 36, 37, 1874.

Anomalies of voice and speech. COËN. *Ibid.*, 35, 36, 1874.

Neuropathological observations. BERNHARDT. *Berl. klin. Woch.*, 36, 1874.

Case of alalia hysterica. BELLIN. *Ibid.*, 37, 38, 1874.

Dementia senilis. KRAFFT-EBING. *Der Irrenfreund*, 5, 1874.

Woorara in tetanus. GHIO. *Gazz. Med. Ital. Lomb.*, July, 1874.

SYPHILOGRAPHY AND DERMATOLOGY.

Therapeutics of syphilis. ZEISSL. *Allg. Wien. Med. Ztg.*, 33, 1874 (Part i.).

Xeroderma. GLAX. *Ibid.*, 35, 36, 1874 (Part i.).

Treatment of gonorrhœa. HABERKORN. *Berl. klin. Woch.*, 34, 1874.

Transmission of syphilis by vaccination. TESCIONE. *La Campan. Med.*, 4, 1874.

Elephantiasis of scrotum and its removal. CORRADI. *Lo Sperimentale*, Aug., 1874.

Transfusion of blood in pellagra. TAMBURINI. *Ibid.*

Urethral strictures and their treatment. TASSI. *Arch. d. Med. Chir. e Igiene*, April and May, 1874.

OPHTHALMOLOGY AND OTOLOGY.

Cases of transplantation in eye practice. ILLING. *Allg. Wien. Med. Ztg.*, 33, 35, 37, 1874.

MISCELLANEOUS.

A press for compressing bulky drugs. ROSENTHAL. *Berl. klin. Woch.*, 34, 1874.

A new method of administering chloroform. HEIBERG. *Ibid.*, 36, 1874.

Report on medical meteorology and climatology. RICHTER. *Schmidt's Jahrb.*, 7, 1874.

Description of a cremation furnace. TERRUZZI. *Ann. Univ. d. Med.*, July, 1874.

Michael Servet and Symphorien Champier. TOLLIN. *Virchow's Archiv*, lxi., 3, 1874.

Progress of Medical Science.

BRAIN AFFECTIONS DURING THE EARLY STAGES OF SYPHILIS.—Among the recent facts that have been ascertained regarding the natural history of syphilis none appear to be better established than those showing the possibility that any organ of the body may be affected during the early or later periods of the disease. Lang has collected a number of cases of syphilitic lesions of the brain, and deduces from them the following points of diagnostic value:

1. Headache is an important symptom in cerebral disease of syphilitic origin. Those pains that are localized at certain points and have a nocturnal character are apt to be associated with the later forms of the disease; in the early periods the pain is apt to be diffused. 2. Attacks of dizziness are among the early symptoms, and probably are dependent in most cases on hyperæmias of the brain or its membranes. 3. Paralyses are apt to occur suddenly during the early periods of syphilis, with or without loss of consciousness; apoplectic attacks in persons about the twentieth year point rather to syphilis than to other causes. In the latter periods of the disease paralyses develop gradually, spreading over the muscles; in very advanced cases mental disturbances may also be associated with the disease. Paralyses of certain groups of muscles appear at both periods; the muscles of the eye are more frequently affected in the early periods, and the facial muscles in the later periods. Paraplegias are apt to appear early, and

hemiplegias late. 4. Epilepsies after syphilis are generally connected with old cases of syphilis, and they rarely, if ever, are known before the thirtieth year. 5. Anomalies of the nerves of sensation have seldom been noticed. 6. Weakness of memory, impairment of mental vigor and intelligence, appear both early and late. 7. Mental disturbances have only been observed in the later periods. The few autopsical records of these diseases show that in the early stages inflammation is most apt to attack the more delicate membranes of the brain; encephalitis, with or without arachnitis, is less frequent, while inflammation of the dura mater is quite rare, and only occurs under the form of pachymeningitis interna. There may also be, at first, as stated before, hyperæmias of the brain and its membranes. In the later stages pachymeningitis externa has been most frequently observed; there may also be inflammation of the brain and its membranes, usually excited by the presence of gummy tumors; then there may be gummy tumors alone, and finally it is likely that there is an affection of the cerebral vessels, the nature of which is still obscure.—*Rundschau*, September, 1874.

Tracheotomy with the Red-Hot Knife.—Saint Germain, who advised opening the trachea with a button-shaped cautery iron, has tried the following modification of this operation on a three-year old child who was suffering from croup. Locating the crico-thyroid membrane with his finger, he fixed the larynx firmly with one hand, while with the other he took a red-hot, probe-pointed knife, and directing the edge downwards he pressed it into the larynx, just below the edge of the thyroid cartilage; there was no difficulty in doing this, and the loss of resistance showed that the knife had entered the cavity. The knife was thus made to cut downwards through the cricoid cartilage and the first ring of the trachea. The operation was entirely bloodless. Using a dilator, he found no difficulty in introducing the canula. The case progressed favorably from this date.—*Gaz. Med. de Paris.*—*Wien. Med. Woch.*, 26, 1874.

Belladonna in the Treatment of Exophthalmic Goitre.—Dr. Smith, of London, strongly advocates the use of belladonna in this disease, and bases his reasons for so doing on two cases which came under his treatment. One was a young woman, twenty-four years of age, who began to complain of weakness and a tired feeling in her eyes, palpitation of her heart, and a remarkable fulness in her neck. Her sufferings were so great that she was obliged to give up her work. For six months or more she took preparations of iron, but obtained no relief. Her eyesight was now much affected, and she felt a constriction about her throat and difficulty in swallowing. The right lobe of the thyroid gland was considerably enlarged, the carotid could be seen to beat from a distance, and a distinct murmur could be heard over it. The heart beats were violent and the tones loud, but no murmurs were heard. The patient could get no sleep at night, and was harrassed with violent palpitation and copious sweats. She was then treated with digitalis and nux vomica and the constant current, but in vain. Iron with ergot and veratria were then given. The symptoms continued to grow worse. Belladonna was resorted to for the reason that most authors connect the disease with a paralysis of the cervical sympathetic, and John Harley and others regard belladonna as a stimulant for the sympathetic. Five drops of the tincture were given hourly and produced an excellent result. The pulse fell to ninety, and then after four days to eighty. The patient was now, for the first time, able to take a walk. Ten days later a drachm was given daily in divided doses. At the end of two months there was entire disappearance of all bad symptoms, such as enlargement of the thyroid, exophthalmos and palpitation, and the patient was regarded as cured. The second case was a lady, twenty-two years of age, who had all the symptoms of the foregoing case, except exophthalmos, and, in addition, had a peculiar red rash upon her face after any excitement. The eyelids in this case were swollen, and the patient suffered much pain in her eyes, though there was no conjunctivitis. The pulse was 130, and the right lobe of the thyroid was enlarged. She also suffered from constipation, and in the night had rushing of blood to her head and a sense of fulness there, with palpitation. These attacks ended with copious sweating, after which the patient was much exhausted. Such remedies as iron, digitalis, valerian, zinc, ice to the head, aconite, iodine, and the constant current gave her no relief. Belladonna seemed to be equally successful in this case, except that violent headaches supervened, and epistaxis and angina pectoris, which last was overcome by chloroform. After a month's use of belladonna the patient seemed to be restored to her former health. The thyroid did not diminish in size, but became firmer and harder. Interesting points in these cases were, that the patients gained in flesh under the treatment, and that when it was suspended the old symptoms returned, but when renewed they soon abated—*The Lancet*, 26, 1874.—*Allg. Med. Central Zeitung*, 72, 1874.

Treatment of Syphilis according to the Vienna School.—Zeissl states that in his experience he has found that iodine in the proper form will arrest or modify the first manifestations of syphilis, so that only a short course of mercurial inunction will be necessary to effect a cure of the disease. Iodine when used in this way will not cause the induration to disappear as rapidly as the mercurials, but it has much more effect upon the skin and mucous lesions. Desirous of avoiding the iodide of potash, he has given iodine in the form of the tincture in the following formulæ: Tinct. iodinii, ʒ ss.; aquæ destill., ʒ vi. M. A teaspoonful morning and evening. Under this method of treatment the lesions of the skin and mucous membranes disappeared in from fourteen to forty-eight days. Iritis and the pustular syphilides were the most obstinate forms of the disease to be met with, and for them mercurial inunction was required. He had never observed any acne follow the treatment with iodine. He found iodoform of great use as a local application to indolent ulcers, and also as an internal remedy in the form of pills. The dose should be from two to three grs. daily.

Sigmund does not think that the internal use of corrosive sublimate has any advantage over the mercurial unguents; it is necessary at the same time to be on the watch for digestive disturbances; the patients must also avoid exposing themselves to taking cold, just as during the treatment by inunction. The sublimate should not be given to old people or young children. He does not believe that there is any advantage in combining the iodide of potash with the mercurials. Psoriasis and certain forms of skin infiltrations are successfully treated by local applications of the sublimate, but there is no special advantage in using it hypodermically; if, however, it is advisable to use some form of mercury in this way, calomel is to be preferred.—*Wien. Med. Woch.*, 15, 19, 31, 35, 46, 1873.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, November 16, 1874.

THE RELATIONS OF GENERAL MEDICINE TO SPECIALISM.

It is within the recollection of the majority of the medical men who have been engaged in the practice of their profession for the past fifteen years, how bitter was the opposition against the cultivation of specialties. The discussion of the merits of the question was a feature of the annual meetings of the American Medical Association and of all the other large bodies, and almost invariably led to bad feeling among the disputants without a promise of a solution of the difficulty, or an attempt at a compromise. Finally, in view of the inevitable quarrel which terminated the family talks upon the question "to be or not to be," all discussion was by common consent waived, and the conservative majority signified their willingness to have the truth proven by the survival of the fittest. Since that time many changes have occurred, and it is not saying too much to affirm that specialism has not only worked its triumphant way to the front rank of usefulness, but has proved itself indispensable to progress in medicine. If any one doubts the latter assertion, let him contemplate the astonishing advances which have been made by the careful cultivation of the different special branches of study by the first minds of the civilized world, and the opening up of new fields of investigation in every department of general medicine.

We all admit that it is worse than folly to attempt to be well enough informed on the different specialties to enable us to be independent of the aid of specialists in our general practice. The more we appreciate the thoroughness with which the different specialties are studied, the more willing are we to admit that any one of them requires the devotion of a lifetime. The circle of each special study is widening to such an extent from year to year, that we may well doubt whether a lifetime may after all be sufficient to master all the details which thousands of earnest workers are constantly accumulating. What may be said of the specialists can with equal truth be made to apply to general medicine and surgery; and the general physician or surgeon, far from being jealous, as formerly, of the apparent encroachments of specialism, must congratulate himself that he has now a better opportunity for keeping pace with the advancements in his own lines of practice.

The very impossibility of keeping up with each specialty, and becoming equally well informed in all branches, brings us to the question how we can best draw that distinction between general and special practice as shall best serve the interests of medicine and secure the greatest good to our patients. In the treatment of certain affections under the domain of specialism there is a point beyond which the general practitioner is not expected to go, and from which point the case should be resigned to more skilful hands. It is not expected because a particular organ becomes diseased that the case should be given at once into the hands of a gentleman to whose specialty the diseases of such an organ may belong. A general practitioner is expected to treat a simple conjunctivitis, an ordinary case of otitis, a trivial affection of the throat and the like, but at the same time he presumes to be competent to judge between a mild and a grave affection of any of the special organs. In old times the treatment of almost all affections was monopolized by the general practitioner, and the knowledge of these affections was so limited that such a thing was possible; now, however, the specialist comes in to commence treatment where the general practitioner leaves off, and from that point is capable of carrying it to a successful issue and to bring about recoveries the possibility of which were hardly dreamt of before. It is in consequence of the possession of this special skill that the specialist has a claim upon the practitioner and upon the patient.

The precise time when a practitioner should resign his case to the specialist must vary with the intelligence of said practitioner, the appreciation of his responsibilities, and on the result of a culpable neglect. For practical purposes, however, we are warranted in assuming that so soon as special skill is required in the treatment, or so soon as there appears to be a liability that such skill may be needed, the case should be gracefully resigned.

We are not prepared to deny that this is not the general custom, but the exceptions are sufficiently numerous to prompt us in calling attention to them. The younger medical men are particularly liable to create these exceptions, and perhaps they are not so much to blame for so doing as are their teachers. The primary cause would appear to be in the manner in which they are taught at the different medical schools. In the anxiety to give the best of medical instruction, the

teachers attempt altogether too much, and sacrifice the time which should be devoted to the gaining of useful knowledge to what may be termed a devotion to high art in medicine. The student is made to believe that he is as capable of performing an operation for cataract as he is of treating an ordinary case of pneumonia, or that there is as much of a chance for him to ligate the arteria innominata as there will be to perform version. Is it to be wondered at that when such cases may, by some curious accident, fall in his way, there will be any hesitation on his part in assuming the responsibilities. It is truly an amusing and at the same time a melancholy suggestive circumstance, to see the operating theatre almost invariably crowded, while the fever wards and the lying-in chambers are so shamefully neglected. The rarer the operation, the greater the number present, each student expecting, of course, that he must have an opportunity of making his reputation upon just such a case. He may have such a case, but if he does, all we can do is to pity the poor patient who may trust to the unwarrantable conceit of such an adviser.

We believe it necessary to do everything which may tend to improve our systems of medical education, to establish extra and special chairs in the general courses of lectures; but the instruction in all these special departments should be given with the sole idea of their utility to the ordinary practitioner. As at present carried on, the system is apparently calculated to induce the student to believe that when he graduates he can dare to attempt anything ever done before by anybody and everybody. The difficulty, we imagine, is, that there is not enough care taken to point out those cases which, as a general practitioner, he may be called upon to treat, and those cases which he must not treat unless he has a more thorough preparation than the college course allows. In fact, the graduate should be taught what is general practice, and what belongs to the practice of a specialty. To be well prepared to engage in general practice, he must have the general foundation of knowledge well laid, and such comprises all the ordinary diseases of every organ. The teachers of specialties can certainly occupy their time to no better advantage than by teaching the principles of treatment, the methods of diagnosis, the necessary measures to be adopted to prevent accidents, and the symptoms which should always demand the resignation of the case to an expert. This very kind of teaching gives the student the best possible chance to succeed in general practice, and the best possible preparation for the commencement of the study of a specialty.

In the matter of simple justice to the specialist who devotes his whole time to the study of his branch, the general practitioner should always be ready and willing to give him every opportunity for the exercise of his special skill. Nothing but good can come of this to all parties concerned. In regard to securing skilful services, this remark applies with equal appropriateness to such gentlemen who may not, in the strict acceptation of the term, be called specialists. These gentlemen may be said to occupy medium positions between the specialist and the general practitioner; their special skill in the treatment of one or more diseases may be viewed in the light of a cultivated accomplishment. We have instances of this in the particular attention which a physician pays to the diseases of a particular apparatus, in the experience which a surgeon acccumulates in the performance of a particular operation. Such gentlemen deserve encouragement; and no conscientious physician or surgeon who has the best interests of his patient at heart can ignore the claims of such experts; in fact, by so doing he would sacrifice the dearest of all professional obligations, to the paltry and mean consideration of a few extra dollars in his own purse.

Reviews and Notices of Books.

RÜDINGER ATLAS OF THE OSSEOUS ANATOMY OF THE HUMAN EAR. Translated and edited, with Notes and an additional Plate, by CLARENCE J. BLAKE, M.D. Published by A. Williams & Co., Boston. 1874.

EVERY earnest student can probably remember how desperate were his efforts, while "studying the bones," to obtain even a moderately clear idea of the concealed portions of the temporal bone. Even with the aid of good dry preparations and the illustrations of the best text-books, he must have failed in his efforts to gain a clear insight into this most fascinating portion of the human frame. In the present work the beauties of the temporal bone are unfolded, one by one, with marvelous clearness. The photographic representations give a naturalness to the parts which no degree of skill in engraving could ever attain. Delicate dotted lines, with numbers attached, which correspond with those given in the text, render it an easy matter to verify each point in the anatomy with absolute accuracy.

To the original series of Rüdinger's plates Dr. Blake has added one which, in importance, at least equals any other in the series. In the preparation from which the photograph is taken, the anterior portions of the external auditory canal and tympanic cavity have been cut away in such a manner as to show not only the relations of the meatus, tympanum, Eustachian tube, and antrum mastoideum to each other, but also many of their anatomical details. An instructor, well provided with specimens, and with needle in hand as a pointer, could hardly demonstrate these parts more satisfactorily to the pupil than do these carefully prepared photographic plates.

We can join most heartily with the editor in expressing the hope that a sufficient interest will be shown in the present series to justify the publishers in issuing further works of a similar character.

BELLEVUE HOSPITAL.—The following gentlemen have been appointed in accordance with the new regulations: College of Physicians and Surgeons, Dr. T. M. Markoe and F. Delafield; Bellevue Hospital Medical College, Drs. F. H. Hamilton and E. J. Janeway; University Medical College, Drs. E. Mason and W. H. Thomson; and from the profession at large, Drs. J. W. S. Gouley and Gouverneur M. Smith.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 8, 1874.

DR. AUSTIN FLINT, PRESIDENT, in the Chair.

THE first paper for the evening was read by Prof. J. C. Dalton, M.D.,

"ON A NEW METHOD OF OBSERVING THE LOCATION OF ABSORPTION BANDS IN ORGANIC FLUIDS,"

of which the following is an extract:

The difficulty in observing absorption bands is precision of measurement by the ordinary means used in the measurement of the lines in sunlight.

The cross lines in common use at the eye-piece of the observing telescope are not necessary at all, and are not convenient in the observation of absorption bands of organic fluids.

A better plan is to place in the eye-piece of the observing telescope a simple *vertical* wire. This works well for the observation of the bright portion of the spectrum; but for the dark portion of the spectrum it does *not* work well. To overcome this, make a lateral opening in the eye-piece, and attach a mirror in such manner as to throw light upon vertical wire, and make it appear like a bright line when the darker portion of the spectrum is to be observed. The plan for observation to which more special reference was made, was one by which the position and dimensions of absorption bands, with reference to the sun-lines, which are always used as a standard of comparison, may be seen at a glance without graduating scale or vernier. By this means, when one glance has been made, it is possible to tell another person exactly where the bands are. The ordinary arithmetical calculation of the old method, which, for a great many persons is exceedingly laborious, is entirely done away with. For this purpose a third telescope is used, bearing a scale. This telescope is so adjusted that the scale and spectrum can be seen at the same glance. The peculiarity of the plan consists in the peculiarity of the scale.

First, an arbitrary scale is made upon card-board (twenty inches long by seven or eight wide is a convenient size), which runs up to about 200. A horizontal band is left vacant between the upper and lower portion of these scale lines, just wide enough to take in the spectrum. This arbitrary scale is then photographed down to a size to fit the third telescope. It is then verified by the sunlight. When verified, a negative is made for producing permanent scales.

Great difficulty was experienced at first in obtaining a suitable negative, one which would leave sufficiently clear and well-defined lines and sufficiently black interspaces. Such a negative was finally produced by Mr. Mason, photographer at Bellevue Hospital.

Another precaution is, the telescopes must bear a proper angular relation to each other, in order to bring the scale and spectrum into perfect view at the same time, and when this has been obtained, the instruments must be fastened permanently by means of screws or other apparatus specially designed for that purpose.

The second paper for the evening was read by Dr. Thomas R. Pooley,

"ON SOME OF THE CAUSES OF SUDDEN BLINDNESS."

Among the causes enumerated were hemorrhage into the vitreous, glaucoma fulminans, large and sudden detachments of the retina from the choroid, embolism of the central retinal artery, ischæmia retinæ, transient and complete anæmia of the retina preceding epileptic attacks, and certain cases occurring in the course of Bright's disease, denominated "uræmic amaurosis." The latter is a condition differing from the retinitis of Bright's disease.

The Academy then went into executive session.

Stated Meeting, October 15, 1874.

DR. AUSTIN FLINT, PRESIDENT, in the Chair.

ANCHYLOSIS AND ITS TREATMENT.

After the reading of the minutes of the previous meeting, the President introduced to the Academy their distinguished guest, Mr. John Eric Erichsen, of London. Prof. James P. White, of Buffalo, was also introduced as a newly elected Corresponding Fellow of the Academy. Prof. White responded with appropriate remarks. The paper for the evening was then read by Dr. Sayre upon "Anchylosis and its Treatment."

Two forms of this condition were recognized.

First, True, osseous, complete, in which there is no motion; *second*, false, fibrous, incomplete, in which there is limited motion, although in some cases it may be exceedingly slight. Anchylosis is not a disease of itself, but is a result. In fibrous anchylosis it is possible that motion cannot be detected at the time of the examination; but if the examination is followed by pain in the part within the next twenty-four hours, it may be regarded as being diagnostic of mobility.

The manner in which the breaking-up process was to be performed and the after-treatment to be adopted were fully discussed.

It was believed to be better to restore the joint to its normal position by means of manual force, assisted by tenotomy, myotomy, etc, rather than to resort to the slow process of gradual extension.

If sections of tendons or muscles are made, the operation should be performed, and the external wounds be permitted to heal before *brisement force* is resorted to. When resorted to, it should be *thoroughly* applied, for one of the most common causes of failure in effecting a cure arises from the incompleteness with which the breaking-up process is performed.

The limb should *immediately* after the operation be *firmly* bandaged from the tips of the extremities to a point well above the joint affected, care being taken to thoroughly strap in the joint affected before passing the roller over it, and also to cut off a portion of the blood supply to the limb, by placing a piece of sponge over the main artery, and securing it by the bandage in such a manner as to partially compress the vessel. The limb is then to be placed in some form of apparatus, no matter what, that will secure complete and perfect immobility until all danger from the supervention of inflammation has passed away. Bags of ice are to be kept around the joint, and such internal remedies administered as may be necessary to meet the rising emergencies. Several cases were then presented to the Academy in which the results obtained were eminently satisfactory.

DR. POST was of the opinion that the *presence* of pain *at the time of the examination*, if carefully discriminated from the pain of pressure necessary to be made in making the examination, is diagnostic of fibrous anchylosis; and its *absence*, under the same circumstances, is equally diagnostic of bony anchylosis.

Dr. Sayre regarded the absence of pain at the time of the operation as unreliable; for in several cases he had known pain to be absent at the time of the examination, and the subsequent history of those cases demonstrated that the anchylosis was fibrous in character. Those patients, however, were examined under the influence of anæsthetics; but the pain which followed the examination was not complained of until several hours afterwards.

MR. ERICHSEN, of London, was invited to speak upon the question under discussion, and remarked substantially as follows:

There are two or three points in connection with Dr. Sayre's paper which are entirely new to me. One, especially, is with regard to establishing a diagnosis between the true and false anchylosis by the production of pain at the time of the examination, or its development within a short time after the examination. In my own practice I have not observed this fact; in point of fact I have overlooked it, but shall look for it in the future. The plan which I have usually adopted in examining the joint is to first place the patient under the influence of an anæsthetic, and then make a careful examination for the purpose of determining whether *motion* is present or not; and I cannot recall to my mind any case in which I was not able to detect motion in false anchylosis by giving attention to one or two simple points.

Flexing the portion of the limb nearest to the trunk, and then placing the two thumbs, one just *above* and the other just below the edges of the articular surfaces; for instance in the knee-joint one thumb is to be placed *below*, over the head of the tibia, close to the articulating surface, and the other *above*, over the condyle of the femur, at a corresponding position, and then, having an assistant, make efforts at producing motion. In this way I have always been able to determine whether motion was present or not. I can readily conceive, however, that there are cases in which there might be extreme difficulty in determining whether motion is present or not.

With regard to *brisement force*, I have had some experience in its practical application. In the *brisement force* a good deal depends, so far as result is concerned, upon the kind of false anchylosis we have to deal with; for I have to go one step farther than did Dr. Sayre, and subdivide false anchylosis into several different kinds.

In the first place, we have that form of false anchylosis which is common enough as the result of rheumatic inflammation or blood-poisoning, which is closely allied to rheumatism or pyæmia; or to a condition between the two perhaps, in which there is a tendency, not as in pyæmia, to the deposit of pus nor the development of the ordinary symptoms of rheumatic poisoning, but of that kind of poison of which gonorrheal rheumatism is an illustration. In this kind of poisoning anchylosis is very common, and in some cases is extreme and almost perfect. In these cases, however, the joint structures themselves, the synovial membrane, etc., are perfectly sound, and when you break down such a joint as that, you can obtain perfect mobility afterwards. But there is another class of cases of fibrous anchylosis, of which I have seen a good many, and in which I am not so well satisfied with the *brisement force*. These cases are those in which destruction of the synovial membrane has taken place, bands of adhesion have perhaps stretched across the articular surfaces, and the ligaments have become softened, etc.

Such a case presented itself to me not long ago. In that case the joint was broken down after death. Upon dissection something like the following condition of things was found: The synovial membrane had disappeared, as the result of the old disease, there being merely a quantity of fibroid tissue binding the joint together. The posterior crucial ligament was torn off from the tibia, and had torn away with it a scale of the tibia. The ligamentum posticum was thrown into folds, and could not be forcibly torn off. In these cases I do not believe you can ever restore mobility. We can get the limb into a good position, which may give the patient very much benefit, but never get mobility of the joint. In the knee-joint there is a peculiar deformity, which will enable you to diagnosticate the presence of this condition of affairs; it is a displacement of the tibia backwards, with a projecting of the popliteal space, so that when the limb is restored to its normal position as near as possible, the articulations are not, and cannot be fully restored to their normal position. It is the puckered condition of the ligamentum posticum that prevents the articular surfaces from being restored to their normal position.

Another cause of partial anchylosis is *slight displacements* of the articular surfaces of joints. This is not very infrequently seen at the shoulder-joint, and in that case is probably due to some peculiar condition of the circumflex nerve. In such cases, when the patient is placed under the influence of an anæsthetic, motion can be freely made in all normal directions, but the anchylosis will return again after a short time. I would therefore make a distinction between those cases in which the synovial membrane is intact and those in which it is destroyed. In the first class of cases the *brisement* force is of great value. When it *is* resorted to, I fully concur with Dr. Sayre that the limb should be placed in an immovable dressing at once.

There is another point referred to in the paper of Dr. Sayre which I feel I should not neglect to call attention to, and that is, in the treatment of osseous anchylosis. The surgeon should not content himself with simply cutting across the bone, but a portion of the bone should be removed; and if for the relief of the hip-joint, it should be removed above the insertion of the psoas and iliacus muscles. If the bone is simply cut across, it may permit of restoring the limb to a straight position, but anchylosis will follow the operation.

I have never seen a case in which simple section of the bone had been made, in which the result has been anything except anchylosis.

The principle for which the Doctor contends is this, you must saw out a piece of bone, and unless you do that you will get osseous union again, your operation placing the bone in the same position as that which obtains in a compound fracture, consolidation taking place at the end of a few months at longest; whereas if you cut out a portion of bone you will get mobility established the same as you may when the bone is excised for the cure of hip-joint disease. I think that this point is an important one, as to the comparative advantages of a simple section or exsection of a portion of the bone. I think there is special advantage in the latter method of operation in restoring mobility to the limb, rather than simply sawing the bone across, leaving it something in the same condition as it would be with a compound fracture in the same position.

Upon motion of Dr. FINNELL a vote of thanks was given by the Academy to Mr. Erichsen for his highly interesting remarks.

The paper was further discussed by Drs. Buck, Gouley, and Crosby.

NEW YORK MEDICAL LIBRARY AND JOURNAL ASSOCIATION.

Stated Meeting, October 9, 1874.

DR. J. C. PETERS, PRESIDENT, in the Chair.

SEPTIC ENTERITIS.

THE paper for the evening was read by Dr. A. Jacobi, entitled, "Septic Enteritis."

This title was given to the disease for the reason that in the larger number of cases it localized its effects upon the mucous membrane of the intestines, and especially because in all those cases which had of late come under the author's observation the intestinal symptoms were most prominent and most dangerous.

After giving a review of the anatomy and physiology of the intestines, it was noticed that the first stage of an enteritis depended upon the condition of the tissue in which the disease takes place. There is the very thin epithelium which does not prevent external irritations from coming in contact with the deeper portions of the intestine. Farther, it is noticeable that enteritis, or hyperæmia of the intestinal mucous membrane, is facilitated by a peculiarity shown in the anatomical condition of the arteries and veins. They both perforate the intestine in an oblique direction, and the veins have much thinner coats than the arteries. In the mucous membrane of the intestine whatever irritations take place they exert very great influence, for two reasons: they produce a direct local irritation and cause increased peristaltic motion, which produces increased facilities for absorption, especially through the veins.

The causes of Catarrhal Enteritis were: Obstructions of circulation in the liver; a number of diseases of the organs of circulation and respiration, such as some form of chronic valvular disease of the heart, etc.; disturbances of the circulation of the periphery of the external integument; collateral œdema of peritonitis, especially puerperal; a large number of nervous disturbances—some have supposed that the diarrhœa of cholera is the result of depressing influence of the poison upon the nervous centres; local irritation, such as obtained by the administration of drastics, etc.; presence of a large quantity of bile in the intestines; sometimes presence of parasites; sometimes presence of a large number of fungi; sometimes the result of irritation from fæcal matter; sometimes the result of influences, the nature of which we have no definite knowledge; sometimes the result of the presence of putrid material, either in the intestine or in the blood of the entire system of the patient, such as the diarrhœa of typhoid fever, etc. What is putrefaction? What is sepsis? The presence of something foreign has always been presumed to exist in the blood of all those patients who suffer from diseases that Virchow has called infectious, and other observers zymotic. For some time it was assumed that something alive was the cause of this class of diseases.

At this point commenced quite an extended discussion of the various organisms which have been found in the human body in connection with certain diseases, such as vibriones (*oidium albicans*), bacteriæ, micrococci, etc., etc. The conclusions of Billroth were finally presented, which were that certain organisms are found in connection with a certain class of diseases, but that they are not *necessarily* present.

Are the organisms which produce sepsis identical? We have no power of the microscope to determine this point. It may be that these microscopic organisms secrete a poison independent of the organism itself, the same as we now know that microscopic fungi will produce poisonous effects, independent of the fungi itself.

When the putrid materials are introduced into the stomach the effects are various; the intensity of the symptoms depending upon the quantity of the poison taken in. Sometimes the effects are nothing; sometimes increased temperature, general debility, death; sometimes death from inanition. The same results can be obtained by injecting the material into the cellular tissue; and here again the quantity injected influences the subsequent phenomena.

When injected into the veins, the intestines are *always* affected. The quantity again has its influence. When the liquid has been dried, and subsequently moistened, it has the same effect. When the liquid has been exposed to the effect of heat up to the boiling-point, and then introduced into the animal economy, the effect will be the same.

With the introduction of putrid gas the results vary a great deal. There is less effect when the material is brought into contact with the mucous membrane than when brought into immediate contact with the blood.

When large quantities are injected into the system, death may take place within a few hours, without producing but little change in the internal organs. When smaller quantities are taken, intestinal symptoms are developed in preference to all others—hyperæmia of the small intestines, sometimes of the liver, the spleen, but nothing of the kind in the brain. Is the poison chemical? This is a mooted question.

The chief effects of the disease are manifest in the stomach and intestines. A large majority of changes take place just above and just below the valves, where the glands are more numerous and of greater size. In all those places where the fæces are accumulated and undergo disintegration the changes are very much more perceptible.

No organisms were found in the case which fell under the doctor's observation. The general history of the case was as follows: Patient was sick seven or eight weeks. As far as stomach and intestines were concerned, was perfectly well before the attack of diarrhœa, which was persistent throughout. Early the patient stated that she felt very bad, indescribable; and that she certainly should die from the sickness. Vomiting attended the diarrhœa at first, but soon disappeared. Pain was soon developed along the region of the colon, especially the ascending and transverse branches, and persisted throughout.

Temperature ran up to 104°, 105°, 106°.

Passages frequent, serous, and at one time slightly bloody. Emaciation gradually developed. Nervous symptoms gradually developed; occasional delirium, etc. Pulse 120 to 126. Transfusion was resorted to towards the close, but with only temporary results. Medicines had but little influence throughout the entire course of the case. Perspiration was free, especially over the trunk, but not excessive.

Stated Meeting, October 16, 1874.

The paper for the evening was read by Dr. A. D. Rockwell, upon "The Tonic and Antispasmodic Relation of Electricity to the Diseases of Childhood."

It contained a brief outline of the physiological and chemical action of electricity, and also the power which the agent possesses for sustaining nutrition.

Its application in the treatment of certain spasmodic diseases of childhood was alluded to and cases cited. The doctor was certain that he had seen some benefit

from its use in the treatment of chorea, but especially those cases of long standing which had resisted a variety of other treatment.

A single case of spasm of the glottis had been treated with electricity, and apparently with great benefit.

Whooping-cough had been treated in several cases by both central galvanization and local application of the agent, and with some satisfactory results.

Marasmus.—Some cases of this affection had been treated by the use of electricity, with some encouragement for further efforts in that direction. In the case more particularly referred to, the electrical treatment was associated with other forms of treatment, medicinal, etc.

DR. PIFFARD presented a few novelties in the way of apparatus, after which the Association adjourned.

NEW YORK MEDICO-LEGAL SOCIETY.

Annual Meeting.

CLARK BELL, ESQ., PRESIDENT, in the Chair.

THE MEDICAL JURISPRUDENCE OF POISONING.

THE paper for the evening was read by Prof. R. Ogden Doremus, "Upon the Duties of Members of the Medical and Legal Professions, Toxicologists, Pharmaceutists, and County Officers in Cases of Poisoning, and the Necessity of Proper Legislation upon the Subject." The following is a brief outline of the paper:—

"The crime of taking human life by poison is the worst of crimes."

First. With regard to the duties of the physician when called upon to act in a case of suspected poisoning.

It is a common opinion that the *stomach* is the chosen organ for the reception of the poison, and therefore the only part of the body necessary to be carried to the analyst for examination. This is a mistaken notion, and great attention should be paid to the preservation of articles of diet, dishes, and papers which had contained medicines, etc. For example, *arsenic* had been found in a paper which had held a seidlitz powder that had been taken by a patient who had died unexpectedly.

The physician should be careful and preserve vomited matters, whether upon the clothing, carpet, or upon the ground. Urine and fæces should be preserved.

Hypodermic injections are, in these days, constantly used by the medical profession, and frequently such injections are entrusted to the patient or some of the friends. Too great care, therefore, cannot be exercised in examining *every portion* of the body; under the nails; between the toes; in the hair, etc., etc., for evidence concerning the use of this instrument. This is rather a novel part of observation for the medical profession, but the omission of such search is not infrequently profoundly regretted by the physician when placed upon the witness stand.

When the stomach is removed, it should first be ligated at both cardiac and pyloric extremities, and this should be done *invariably*. The necessity of this precaution is at once apparent if a volatile poison has been used, but should not be neglected under any circumstances.

The intestines are rarely sent to the chemist; but these are preferable to the stomach in case but one can be obtained, and a choice must be made. The same precautions should be used in removing the intestines as in removing the stomach. It is well, also, to preserve pieces of the liver, kidneys, and organs of generation. Self-sealing fruit-jars are very good receptacles for the specimens to be preserved. Days, dates, and details should be strictly kept. When placed in such jars they should be kept under *lock and seal* until given into the hands of the chemist.

Second. With regard to the duties of the toxicologist. A word of caution for those who would attempt such an investigation. These investigations should be intrusted only to the hands of the chemist.

When the toxicologist leaves the room in which the examination is going on, he should fasten and seal every door and window. He should only employ new vessels, clean, and cleansed by himself. His chemicals should be of known and not of merely reputed purity. Even the ordinary copper water-bath should always be avoided. The chemist should be exceedingly cautious about starting with any theory when he commences his examination. But suppose the prisoner asserts the commission of the crime, and announces the poison used. No dependence whatever is to be placed upon the sayings of those who have committed the crime.

It is not sufficient that the chemist satisfies *himself* of the presence of poison. In the Wharton trial three chemists made examinations, and were only able to testify that they found antimony sufficient to satisfy themselves. The microscope and spectroscope must be brought to the aid of the chemist in making his examinations.

Another important item stated was, that the extent of the chemical research should be left to the judgment of the chemist and of the district attorney. The doctor was of the opinion that the law governing the druggist and regulating his sale of poisons should be amended. Certain articles can be obtained only upon the prescription of a physician; while others, far more potent as poisons, may be obtained without question. How shall it be regulated? Coroners should have the power to ask the services of the toxicologist. The expert toxicologist may be able perhaps to detect certain important items which even the careful post-mortem physician will not be able to obtain. The parts then removed may be immediately placed in his hands, which saves one link in the chain of evidence.

The coroner should have authority to order an examination apart from the district attorney.

The public should be excluded by law from the court-room during the hearing of testimony unfit for public ears. If this could be legally obtained it would be most desirable. There are certain methods of poisoning, and certain articles used, that are not generally known, and a public exposition of the same is only enlarging the field for criminal action.

At the close of the paper, Prof. Doremus offered the following resolution, which was adopted:

Resolved, That a committee of five, consisting of two physicians, two lawyers, and one chemist, be appointed from the members of this Society, to take into consideration what additional enactments relative to poisoning cases are called for; and that said committee report at some future meeting of the Society. A bill, embracing such necessary changes, to be presented to the next legislature.

WHAT A BABY IS WORTH.—The *Chicago Post and Mail* gives the following as the immediate cost of a first-class baby: Physician, $50; midwife, $25; wet nurse, $50; dry nurse (one year), $150; clothing, $200; baby carriage, $25; total, $500.

Correspondence.

CASES FROM PROF. GUSTAV SIMON'S CLINIQUE AT HEIDELBERG.

To the Editor of The Medical Record.

Dear Sir:—A visit to Heidelberg, on the 26th of September, afforded me an opportuniny of becoming acquainted with Professor Gustav Simon, and of seeing some of his operations, which, during the last few years, have attracted so much attention in the surgical world. Only a few days after my arrival, by a somewhat extraordinary coincidence, Mr. Spencer Wells, of London, who was returning with his family from Switzerland, came to Heidelberg on the same mission as myself. I had previously notified Professor Simon of my intended visit, and Mr. Wells had also done the same for himself; the consequence was, that the Professor had secured a large collection of interesting cases in the hospital where he daily holds his surgical cliniques. Thinking that a short account of some of these cases might prove of interest to many of your readers in the United States, where Professor Simon is so well and favorably known, I ask for the same a place in the Record.

NEPHROTOMY.

The first case to which I shall refer is that of the woman upon whom Professor Simon performed nephrotomy four or five years ago, for the relief, as it will be remembered, of an uretero-abdominal fistule,—an accident resulting from the operation of ovariotomy. The patient is about forty-five years of age and her general health appears to be good. A secondary result of the same operation is a large abdominal hernia, for which Professor Simon will also operate, as he had done in a similar case only a few weeks earlier, which was exhibited for examination. His operation consists in removing the integuments to form two broad and somewhat semicircular, raw surfaces, at equal distances from the linea alba, and then uniting the same with deep and superficial sutures. In order to give greater strength to the cicatrix at its lower extremity, where the strain is greatest, a long tegumentary flap with pedicle, two or three inches above the pubes, is taken from either side and secured by suture between the raw surfaces described.

RENAL CYST.

The next case presented was that of a man, about thirty years of age, who had what appeared to be a deep wound in the right flank, from which issued a thin, watery fluid. Professor Simon said that there had been a renal cyst which he had opened, and that the discharge had continued, though it was now comparatively slight. He introduced a probe, to the depth of five or six inches, and then demonstrated the ease with which the point of the index-finger could be carried into the cyst. Professor Simon proposes in this case, after waiting a little while longer, to refresh the sides of the wound and close the same with a small canula, having a clamp adjusted upon each end and secured by a top-screw. This canula has a broad and deep curve and a slit at its middle to allow the secretions in the cyst to enter and pass off. It is to be introduced through the two edges of the wound upon a trocar needle which is afterwards to be withdrawn.

ARTIFICIAL ANUS.

Another man, aged about forty, was brought before us with an artificial anus in the right iliac region, the result of strangulations of a scrotal hernia. The opening in the bowel was situated at the caput coli, and, owing to its great size, prolapsus of a large part of the ascending colon readily took place upon the removal of a pad which had constantly to be worn. The case was interesting, as affording the opportunity to see, outside of the abdomen, the ilio-cæcal valve and appendix vermiformis; also, as illustrating the time it took, by hydrostatic pressure, for a stream of water to travel through the rectum and colon, which did not exceed one minute. From repeated experiments in our presence it seemed to make very little difference whether the patient was in the recumbent or erect position. This poor creature appeared to be very well contented with his condition, as shown by his indifference to be operated upon. He is a tailor, following his vocation, and is always glad of the opportunity to make a few kreutzers by exhibiting himself at the clinique.

PROLAPSUS OF RECTUM.

In connection with the preceding case, I will refer to two others which were presented to our notice, both women. One had extensive prolapsus of the rectum, the result of a complete division of the sphincter ani backwards, which she said had been made by a surgeon in New York, for the relief of a fistule. The other woman, from St. Louis, had a recto-vulval fistule, quite simple in its character. Upon the first-named Professor Simon had performed a plastic operation with some benefit, though the condition of the poor woman is still deplorable. These cases, with their histories, were interesting to me from the fact of their coming to Heidelberg, to be treated by Professor Simon, from these two American cities where so much attention is given to this subject.

RETROFLEXION AND PROLAPSUS OF THE UTERUS.—THE PASSAGE OF THE HAND INTO THE RECTUM.

The case to which I will now refer—that of a woman with retroflexion and prolapsus of the uterus—is one of unusual interest. Professor Simon had performed several weeks before the operation of *episiorelytrorrhaphy*, and the result, as to the prolapsus, was satisfactory, although, with regard to the retroflexion, little was accomplished. The patient insists that she is no better than she was before the operation, and that, owing to her extreme suffering, at her menstrual periods especially, she is willing to submit to any other operation that promises relief. Professor Simon had thought that the removal of the body of the uterus, under these circumstances, might be justifiable, and, having already demonstrated upon the cadaver the ease with which the fundus could be seized and drawn through an opening in Douglas' *cul-de-sac*, he was ready to put the novel procedure in execution. His colleagues, however, did not sanction the proposal, and it was given up. Mr. Wells and myself were asked for an opinion in the case, which we gave adversely also. But the interest in this case did not stop here, as will readily be seen. The subject of rectal and vesical explorations, which has attracted so much attention in England and America during the last two or three years, was illustrated by Professor Simon upon this patient in the most practical manner. The passage of the hand into the rectum as a means of diagnosis, I believe, originated with him, and, bold and reckless as the procedure may appear to many, it is destined, when better understood, to prove a most valuable means of diagnosis. To be able to pass the hand and arm, per anum, to a point in the abdomen that the left kidney and false ribs can be felt, and the

abdominal wall, of the same side, to the median line, be lifted up, at every point, upon the ends of the fingers, seems almost incredible; and yet I saw this practised by Professor Simon upon his patient. Both Mr. Wells and myself, at the request of the Professor, made the same exploration, with a satisfactory result.

From what I have seen and heard of this procedure, at the clinique of Professor Simon, I am convinced that the dangers and accidents supposed to attend it have been greatly exaggerated. He says he has met with no difficulty, except, now and then a little incontinence of the fæces, which, however, continues only two or three days. The preparation for the operation consists in complete anæsthesia and in thoroughly washing out the large bowels. The latter Professor Simon prefers to do by hydrostatic pressure, using for this purpose a graduated glass cylinder with a faucet near its bottom, and a long rubber tube terminating in the ordinary clyster nozzle. From two to three quarts of water usually suffice. The apparatus is held by an assistant three or four feet above the patient. Professor Simon has now operated eight times through the anus for recto-vaginal fistule, and he thinks the procedure is preferable to the ordinary method where the fistule is situated high up. Why not approach the male bladder in the same manner, in cases of chronic catarrh and ulceration, and of great enlargement of the prostrate gland where micturition is attended with difficulty? Cystotomy, under such circumstances, I have long thought to be not only a justifiable procedure, but one likely to be attended with good and encouraging results.

EXPLORATION OF FEMALE BLADDER BY THE FINGER THROUGH THE URETHRA.

As to the exploration of the female bladder, with the finger passed through the urethra, Professor Simon has had a large experience. He illustrated the procedure upon the last-mentioned patient and also upon several others. He said that he had not found incontinence of urine to follow it. In the particular cases examined before us the bladder was filled with water and the power of retention fully shown. The distention of the urethra is effected by means of a set of dilators made of hard rubber, and ranging in size from that of the largest male catheter to that of the thumb. The dilatation is begun and carried on to the point of distention of the urethral orifice, where the latter is notched on the two sides and in front, the main seat of resistance. After this, the requisite dilatation for the index-finger to pass is easily reached.

In this little procedure there was nothing very novel. Professor Simon, however, had turned it to good account in a case of fungous growth from the vesical mucous membrane, which he diagnosed with his finger and detached with a gouge-shaped scraper. He had also employed the method with great satisfaction in differentiating the size of a fistule, shut in by a colpocleidic operation, performed by another surgeon. The patient who had been subjected to this expedient became dissatisfied with what she had been told was a cure, and came to Professor Simon to be "*uncured and cured over.*" Upon examination he found the closure firm and complete, and no way, except through the urethra, to determine whether the fistule was small or large—this point being considered of the greatest importance, as upon it depended, he said, the justifiability or unjustifiability of re-establishing the vaginal tract. The ready method of vesical exploration with the finger, fortunately for the patient, showed the fistule to be small and curable by the coaptation of its edges. Thereupon the occluded portion of the vagina was opened and the fistule brought into view; this proved to be of the urethro-vesico-vaginal type, scarcely large enough to admit the point of the index-finger. The patient was presented to our notice in this condition. Professor Simon proposes now to refresh and unite the edges of the fistule in the ordinary way.

KALPOKLEISIS.

A case of much interest and importance in its bearings upon the operation of kalpokleisis was next presented—a woman from Russia, aged 32, who was about five months advanced in pregnancy—as indicated by the ordinary signs, and by rectal exploration which proved, under the circumstances, to be of essential service in settling this point. Professor Simon said that ten years ago this patient first came under his care with a large vesico-vaginal fistule, and, believing at that time the coaptation of its edges to be impossible, he determined to shut up the vagina by uniting its two walls in the urethral portion. This he readily effected, and, in a kalpokleidic condition, the woman returned to her family, little supposing that she would ever again have to endure the perils of child-bed. Now she comes back in great distress of mind for further advice, believing her life to be in imminent peril. Professor Simon at first thought that the enlargement of the uterus might be due to fibroma or hæmatometra, but the investigations in question dispelled all doubts upon these points. Upon examination, the seat of the original vaginal closure was found to be about three-quarters of an inch from the urethral orifice. The transversely running cicatrix was plainly seen, but near its middle there was a break, indicating the entrance to a sinus, through which a small probe readily passed and from which urine issued. The discovery of this sinus at once settled the question as to how the spermatozoa had reached the cavity of the uterus and caused impregnation; though it is by no means improbable that they journeyed through the more circuitous route of the urethra, which was seen to be quite patulous, and then, through the vesico-vaginal fistule, reached their ultimate destination. Normal urine does not kill them. Therefore, complete closure of a vagina by kalpokleisis, with a coexisting urinary fistule, does not always presuppose impossibility of impregnation.

The object in this case being to save the child if possible, Professor Simon was in some doubt as to the best course to be pursued. Mr. Wells thought it better to wait until labor set in, and then to open the vagina before the advancing head of the child. He said that he had advised this course in a similar case upon which he had operated a few years ago with a good result. I believe myself that this practice is the best in those cases where there is no doubt that the vagina, above the seat of the closure, is open and free of resisting bands; but if the previous history of the case is not known, and an unfavorable condition of the vagina at the beginning of labor be found to exist, such a course would not only jeopardize the life of the child but that of the mother. Even if the latter should escape with her life, increased injury to the vaginal walls from pressure of the child's head would necessarily result. Not being acquainted with the actual condition of the vagina in the case in question, I therefore favored, as preparatory measures, the immediate division of the kalpokleidic obstruction and any adhesions or bands which might be found, to be afterwards followed by dilatation of the vagina to the fullest extent.

URETHRO-VESICO-VAGINAL FISTULE.

Professor Simon now concluded his presentation of cases by an operation for urethro-vesico-vaginal fistule of a large size. A detailed account of his procedure would doubtless prove of great interest, but, finding my letter already exceeds the limits intended at the outset, this must be deferred to another time. Suffice it at present to say that the method employed is peculiarly Professor Simon's—the best in Europe—and he is a most painstaking operator, ranking with the first in this or any other country. After finishing this operation the Professor politely invited me to demonstrate my method of operating if I wished to do so—an act of liberality that at once shows him to have an exalted appreciation of the claims of other countries and of the best interests of humanity. His example, in this regard, might well be imitated to a greater extent than it is by the public institutions of our own country with great advantage to science. I accepted this kind invitation, and shall return to Heidelberg for the purpose of operating towards the close of this month, at which time Professor Simon enters upon his regular course at the hospital.

Respectfully yours,

NATHAN BOZEMAN.

COBURG, GERMANY, Oct. 7, 1874.

SPECTRAL ANALYSIS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR:—It is with regret that I feel compelled to call attention to the numerous errors contained in the article upon spectrum analysis contained in your issue of Oct. 15. In brief, the article has two prominent faults. Firstly, questions of fact in spectral science are incorrectly stated; secondly, much more is claimed for it as a medico-legal reliance than the true facts warrant. These two propositions I shall endeavor to substantiate by quotations from the author's paper, followed by comments.

Page 529, speaking of the Frauenhofer lines, our author says: "Kirchoff left us a map of these, a masterpiece of correctness and skill, containing many hundreds of sun lines, and our distinguished Rutherford has photographed them right from the sun itself. The exactness of these two mappings is truly wonderful." The facts are, that only a comparatively small number of lines in Kirchoff's maps are coincident with those in Rutherford's photograph, due to the fact that the whole mass of lines from A to about F, on Kirchoff's map, could not be obtained photographically by Rutherford's processes, and the additional fact that the immense number of lines, more refrangible than the line H, which are found in Rutherford's, belong to the ordinarily non-visible portions of the spectrum, and were not seen by Kirchoff. A similar error is committed in reference to Prof. Henry Draper, who "has given us a map containing a great number of sun lines, invisible under ordinary circumstances; these additional lines are made evident at both the *red* and violet part of the spectrum." The fact is, Draper's photograph shows no lines in red, orange, yellow, or green, for reasons known to every photographer and physicist.

Further on, our author speaks of the waves of sound, heat, and light as being produced in the all-pervading ether, and differing from each other simply in velocity: "The vibrations least in velocity produce sound, those coming next produce heat, and those having the highest degree of velocity produce light"!!!

Surely any schoolboy would have told him that the waves of sound are produced in the atmospheric air, and that its particles have their motion in the *same* direction in which the waves progress; while the vibrations of heat and light take place in the luminiferous ether, and that the particles of this ether move in a direction *at right angles* to that in which the waves are progressing. The eloquent description by Dove, of the iron bar swinging at the rate of "billions of oscillations per second," is a little too imaginative.

Page 531, speaking of the extreme sensitiveness of spectral analysis, he says: "This sensitiveness led to the discovery of *five* new metals." Bunsen discovered in this way cæsium and rubidium, Crookes discovered thallium, and I forget who discovered indium; but what is the fifth new metal, and who discovered it?

Speaking of the crystals of hæmato-crystalline he says: "No putrefactive process can annihilate their integrity. Their stability, and indestructibility admirably fit them," etc. The fact is, that like all bodies possessing a complex chemical composition, they are very liable to undergo decomposition. I need hardly say that it is almost impossible to keep this substance, whether in crystals or in solution, unaltered for any length of time. Exposure to ordinary atmospheric influences, to say nothing of acids, alkalis, etc., invariably affects it.

In the next paragraph our author says: "We will find that these qualities of hæmato-crystalline are of the greatest importance in medico-legal cases. When the outer form and integrity of the blood-corpuscles have been destroyed by the various means which the criminal may find within his reach, and when the microscope sends our questions back unanswered, it is yet perfectly practicable to produce the crystals."

The fact is, that crystals of hæmato-crystalline can only be obtained from fresh, and not from dried or chemically altered blood.

Page 534, he says that the criminal who burns the body of his victim will not thereby escape the searching scrutiny of the spectroscope, for spectral examination of the ash will reveal the presence of "sodium potassium, lithium, *cæsium*, *rubidium*, and calcium."

Let me ask, Will not the ash of a dog's remains yield the same spectrum, especially if he has been drinking of the waters of *Durkheim*?

Farther on he says: "When called upon to analyze a metal or mineral poison, we must bring it to a high state of incandescence." The fact is, that all incandescent metals give the same, that is, a continuous spectrum. It is necessary, first, to vaporize them, or some of their salts, especially the chlorides, and then to render their vapor incandescent before we can obtain *distinctive* spectra.

Page 535, speaking of the Wharton trial, he regrets that the "analytical powers of the spectroscope were not brought into requisition. There could not have been an assailable point to the answer which the spectroscope would have given to the question, whether the substance found was arsenicum, antimony, or gelseminum." Will our author inform us what the spectrum of gelseminum is, and whether we are to obtain it from its ash or its solution?

Page 536, he says: "It is evident, and held so by physicists abroad, that no blood examination is perfect and unassailable that is not verified by spectral analysis, and that no conscientious verdict should be given, and no judgment of death pronounced in cases of poisoning, without the positive proofs attainable from the same source."

In the first place, the extreme delicacy of the spectral test would render it unsafe as a medico-legal resource

in the case of the metallic and mineral poisons; and it remains yet to be shown that any of the vegetable poisons can be taken into the system, and after death extracted from the tissues in a condition to be demonstrated spectroscopically.

HENRY G. PIFFARD.

117 EAST 36TH STREET.

New Instruments.

A NEW UTERINE SPECULUM.

BY ALEXANDER S. HUNTER, M.D.,

NEW YORK.

THAT a speculum is chiefly needed for the purpose of facilitating intra-uterine applications and investigations, it is believed will be acknowledged.

It will then follow that such an one is needed as will, without pain, remove that "*troublesome angle*" formed by the diverging axes of the uterus and vagina, and as will fix and retain the uterus and vagina in the relative position thus required without the aid of an assistant.

Although we have scores of varieties, that we have not yet an instrument offering these advantages is my apology for adding to the number one having them in view.

It is an instrument made to operate on the principle of the fulcrum and lever, with the patient in the supine position, and utilizes to accomplish its object certain points of support and bearing afforded by the female genitals.

Reference is here made to the posterior aspect of the cervix, the posterior portion of the sphincter, to the perineum, and to the vagina at its anterior uterine attachment.

The instrument consists of two blades, viz., a superior and an inferior, which are of equal length, but so united that the open extremity of the upper blade projects beyond its fellow one-fourth of an inch. In this respect it differs from all other instruments of its kind, and necessarily, for the reasons which follow: 1st, If the extremities of the blades are of equal length, then, with the instrument inserted, its blades separated, and the perineal extremities depressed, while the open extremities are elevated, they will carry upwards also the vagina and cervix. Now the under blade will occupy the horizontal, and consequently the shortest distance from vulva to cervix, ought it not, therefore, to be the shorter? Again, since the upper blade has to take the oblique, consequently the longer distance from vulva to cervix, and since it is essential that its extremity should support the cervix, does it not follow, therefore, that it ought to be the longer? 2d. With a longer under blade, is not the uterus not only left in its normal position, but absolutely held there by the pressure downwards of the blade in the cul-de-sac? and does not this add to the angle and additional embarrassment in intra-uterine therapeutics? If it were the office of the speculum instead of the index-finger to diagnose positions of the uterus, or *if* it were simply required of it to expose the anterior aspect of the cervix, then there might be a reason for such construction.

The upper blade is also wider at its middle third, that it may the more thoroughly lift the convex wall out of the line of vision.

Its width is reduced at its open extremity, and curved downwards, that when separated from its fellow it may not unduly strain the vagina. The under blade corresponds in width with the upper, except at its middle third, where it is one-fourth of an inch narrower.

This reduction compensates for the increase of the upper blade at this point, and secures a uniform distention of the vagina.

It also prevents the pinching of the folds of vagina on withdrawing the instrument; and since this blade has simply to oppose the posterior or concave wall, which wall at its middle third would almost of itself remain without the field, there is no disadvantage in the reduction.

The under blade at its joined extremity is curved downwards seven-eighths of an inch, and so spread as to make the most of the sphincter and perineum for a fulcrum; from this projection there extends a lever one and a half inches in length, the free end of which is terminated by teeth.

The under-garment of the patient being secured by her weight, affords the power for the successful working of this lever.

With the fulcrum, lever, and power we are able to so retract the perineum, and to so elevate the upper portion of the vagina and the cervix as to remove entirely the angle formed by the diverging axes. If the patient be fleshy, more power will be required to elevate the vagina and cervix; haply for us, we then have the power applied at a more advantageous angle.

The open extremity of the under blade is curved upwards for three reasons: First, That it may the more readily traverse the posterior or concave wall of the vagina, when separated from its fellow and depressed at its other extremity by the lever. Secondly, That it may not unduly distend the vagina at its uterine attachment when the blades are separated. Lastly, and chiefly, That it may impinge against the posterior aspect of the cervix and carry it upwards. It is thickened at this extremity, and so rounded as to distribute the pressure, rendering its use as painless as possible. The blades are shorter than those of other instruments, that the uterus may be brought as near as possible to the vulva. They are, however, long enough for any and every case, since they are so thoroughly maintained in the vagina by the lever; or if it be desired to leave the uterus in its normal position (not using the lever), then by the projection on the under surface of the under blade, which passes just within the sphincter.

That the instrument may answer for all capacities of vagina, the blades are narrow at their joined extremity, and are so united as to form, when separated even to a slight extent, an ovoid opening through the sphincter; the largest operating capacity with the least possible distention of the sphincter is thereby secured. Professor Dunster has also called attention to the advantage which this form affords.

A word with reference to the use of the instrument, as above described, may be of service. Having placed the patient in the supine position, with the shoulders slightly elevated, and ascertained by the touch the position of the os, carefully insert the instrument on its side, through the sphincter, carry its extremity up to within an inch of the cervix, rotate it to its proper position, and separate its blades about one and a half inches. The instrument may now be pressed inwards, in the direction of the cervix, or partially withdrawn, and returned again and again, if need be, until the cervix is found to have taken its place between the blades.

This can be done without producing pain, since the extremities of the blades are terminated by approaching curves.

If the uterus be anteverted, then its cervix may be lifted into the field of the speculum by the aid of a sound slightly inserted in the os externum. If a fold of vagina should surmount the extremity of the under blade, so as to prevent the cervix from occupying the field, then carry the handle of the sound or other broad instrument along the upper surface of the under blade until it reaches the cul-de-sac, which will cause the fold to recede beneath the blade. Now flex the pelvis on the vertebral column. This position, even on a couch ill-adapted, can be secured either by placing a book or other support under the pelvis, or by flexing the thighs so as to form with the trunk a right angle, which position the patient can for a short time herself maintain by grasping with either hand the upper third of each tibia. The cervix and upper portion of the vagina may now be so elevated, and the perineum so retracted as to make the common axis of the uterus and vagina form one and the same straight line, and may be so maintained without producing pain, and without the aid of an assistant, by simply attaching the teeth of the lever to the garment of the patient.*

Not having the angle with which to contend, we need not widely separate the blades, and may therefore spare ourselves the annoyance of the protruding vaginal walls, and our patients the pain to which they have been so often subjected by indiscriminate and rapid dilatation. We should *not* forget to give the muscular fibres time to relax. Are we not in a measure *ourselves* responsible for the horror which so many females have for the use of instruments, and if so, might not their more cautious use add to the number of cures, and consequently reduce the number of those who now continue to suffer their maladies, rather than, like the woman with the issue, "suffer many things of many physicians?"

363 Broome St., *Sept.* 19*th*, 1874.

Dr. Charles Fayette Taylor, of this city, has been elected Corresponding Member of the Medical Society of Vienna.

---

* Sims' speculum diminishes the divergence of the axes by retracting the perineum, to do which it generally, however, requires the aid of an assistant with a tenaculum, and always the gravity of the viscera in the position employed adds to the divergence which is to be overcome.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from October 19, 1874, *to November* 4, 1874.

Head, J. F., Surgeon.—S. O. 229, c. s., A. G. O., relieving Surgeon Head from duty in Department of Dakota, is revoked. S. O. 237, A. G. O., October 31, 1874.

Summers, J. E., Surgeon.—Assigned to duty as Medical Director of this Department. G. O. 19, Department of the Platte, October 24, 1874.

The following named officers will report in person to the President of the Army Medical Board, now in session in New York city, for examination for promotion, and, upon its completion, rejoin their respective stations:—Assistant Surgeons A. Hartsuff, J. H. Janeway, J. R. Gibson, J. M. Brown, H. E. Brown, and Elliott Coues. S. O. 233, A. G. O., October 27, 1874.

Knickerbocker, B., Assistant Surgeon.—To report in person to the President of the Army Medical Board, now in session in San Francisco, California, for examination for promotion, and, upon its completion, rejoin his proper station. S. O. 233, c.s., A. G. O.—Assigned to duty as Post Surgeon at Fort Colville, W. T., when relieved by Assistant Surgeon Bartholf. S. O. 149, c.s., Department of the Columbia.

Notson, W. M., Assistant Surgeon.—Assigned to duty as Post Surgeon at Fort Cameron, U. T. S. O. 162, Department of the Platte, Oct. 30, 1874.

Kinsman, J. H., Assistant Surgeon.—Leave of absence further extended fifteen days. S. O. 237, c. s., A. G. O.

Bartholf, J. H., Assistant Surgeon.—Assigned to duty as Post Surgeon at Camp Harney, Oregon. S. O. 149, Department of the Columbia, Oct. 22, 1874.

Cronkhite, H. M., Assistant Surgeon.—Relieved from duty in Department of the South, to report in person to the President of the Army Medical Board, New York City, for examination for promotion, and upon its completion, to the Commanding General Department of Arizona for assignment to duty. S. O. 233, c. s., A. G. O.

Heizmann, Charles, Assistant Surgeon.—Granted leave of absence for 15 days. S. O. 162, c. s., Department of the Platte.

White, R. H., Assistant Surgeon.—To report to Lieut.-Col. Brooke, 3d Infantry, commanding troops in New Orleans, La., for assignment to duty. S. O. 162, Department of the Gulf., October 13, 1874.

De Hanne, J. V., Assistant Surgeon.—To report in person to the President of the Army Medical Board, now in session in New York City, for examination for promotion, and, upon its completion, to the Commanding General Military Division of the Atlantic for assignment to duty. S. O. 229, A. G. O., Oct. 22, 1874.

Rose, Geo. S., Assistant Surgeon.—Relieved from duty in Department of Arizona, to report in person to the President of the Army Medical Board, New York City, for examination for promotion, and upon its completion, by letter to the Surgeon-General. S. O., 233, c. s., A. G. O.

Carvallo, C., Assistant Surgeon.—Assigned to duty at Fort Stanton, N. M. S. O. 166, Department of the Missouri, Oct. 14, 1874.

ELBREY, F. W., Assistant Surgeon.—Granted leave of absence for six months, with permission to go beyond sea. S. O. 224, A. G. O., Oct. 28, 1874.

MATTHEWS, W., Assistant Surgeon.—Assigned to temporary duty at Fort Hamilton, N. Y. H. S. O. 213, Mil. Div. of the Atlantic, Oct. 28, 1874.

WOODRUFF, E., Assistant Surgeon.—To report in person to the President of the Army Medical Board, New York City, for examination for promotion, and, upon its completion, to the Commanding General Mil. Div. of the Atlantic for assignment to duty. S. O. 224, A. G. O., Oct. 16, 1874.

DICKSON, J. M., Assistant Surgeon.—To report in person to the President of the Army Medical Board, New York City, for examination for promotion, and, upon its completion, to the Commanding General Department of the South for assignment to duty. S. O., 233, c.s., A. G. O.

Medical Items and News.

DR. RICHARD W. BULL.—At a regular meeting of the Roman Medical Society, held October 19, 1874, the following resolutions were adopted:

Whereas, Since the last session of our Society, death has for the first time invaded our circle and has stricken from our roll of members the name of our very dear associate, Richard W. Bull, be it

Resolved, That we unite in offering to the family of our late member the assurance of our deep sympathy, not in the hope that we can lighten the burden of their grief, but as an expression of our claim to share their sorrow, as sincerely as we mourn the loss of him who was dear to us as a devoted friend, and known to all as a true man in the fullest meaning of the name.

Resolved, That these resolutions be entered on the minutes of the Society, that they be published in THE MEDICAL RECORD, and that a copy be sent to Mrs. R. W. Bull.

Committee.—Walter de F. Day, President; Woolsey Johnson, Henry C. Eno, Thomas T. Sabine.

MEDICAL BOARD OF BELLEVUE HOSPITAL.—The Commissioners of Public Charities and Correction have increased the Medical Board of Bellevue Hospital from sixteen to twenty members by the appointment of Drs. William T. Lusk, William M. Polk, C. A. Budd, and Abraham Jacobi.

NEW YORK HOSPITAL.—The library of this institution having been removed to No. 8 West Sixteenth street, and conveniently arranged in elegant and spacious apartments, is now open to the profession. Through the liberality of the governors its free use for *consultation* and *reference* is granted to all visitants of this city and from abroad who may be known to or are properly introduced to the librarian. One of the rooms is devoted enclusively to periodicals, embracing those of Great Britain, Germany, France, and the United States; these will be added to from time to time so as to make this department as complete as possible.

To render these and the numerous other works which belong to the library fully available to the profession, the governors have made the most liberal provision, and hereafter the rooms will be open at the following hours, viz., 10 to 12 M.; 1½ to 5 P.M. and 7½ to 10 P.M., daily.

THE VANDERBILT UNIVERSITY AT NASHVILLE, Tenn., has a Department of Medicine and Surgery. The first course of lectures commenced this fall.

MEDICAL CHARITIES IN ST. LOUIS.—There are thousands and tens of thousands of people in our large cities who, if they can get medical attendance and medicines gratuitously when sick, and quarters in hospital if disabled by accident or disease, will never provide for a day ahead, but spend half their earnings at dram-shops (for the number of which St. Louis has an unenviable reputation). The more charity, the more left for whiskey; and the more whiskey, the more charity needed; until the city is given over to saloons and charity institutions: one-half of the population engaged in making drunkards, and the other half working hard to take care of them.—*St. Louis Medical Journal.*

VIVISECTION.—The following preamble and resolutions were adopted by the Medical Society of the County of Westchester, at the meeting held at White Plains, October 20, 1874:

Whereas, The Medical Society of the County of Westchester, in common with the profession of the State, recognizing the benefits which have accrued from the judicious experimentation upon the lower animals in the interests of society and humanity, and

Whereas, It is believed an effort is to be made before the next Legislature to repeal or alter that portion of the existing laws of this State which permits "*any properly conducted scientific experiments or investigations:*" therefore

Resolved, That this Society believes that the repealing or alteration of said laws so as to interrupt in any way the present existing facilities for scientific investigation will result in arresting the progress of discovery of the varied phenomena of life, and the causes and prevention of disease.

Resolved, That in no department of physical science has greater progress been made than in Physiology and Pathology, and that no discoveries have conferred greater blessings on mankind than those embraced within their domain, exemplified in the brilliant discoveries of HARVEY, AMBROSE PARE, and JENNER, the many illustrious savans of the continent and our own country, all of which have been made and established through the important and indispensable aid of vivisection of the lower animals. That such investigations are conducted without unnecessary pain or wanton cruelty, and usually with the aid of anæsthetics.

Resolved, That the members of this Society, duly appreciating and honoring the wisdom of the framers of our existing laws relating to this important subject, earnestly desire that they may continue unchanged, that the progress of research and discovery which has hitherto distinguished our State may not be interrupted.

Unanimously adopted.

WM. H. HELM, M.D., *President.*
J. FRANCIS CHAPMAN, M.D., *Secretary.*

OFFICE THIEF.—There is a man who makes it his business to call upon physicians at odd hours, and, of course, appearing disappointed in not finding the "doctor in," writes a note in the office. One such individual is known to be a sneak thief, and answers the following description: Age 28, 5½ feet high, dark complexion, red cheeks, black eyes, small black moustache, and short black side-whiskers, wearing round black hat, calico shirt and red stripe, large dark brown overcoat.

While waiting or writing, unwatched, this person has stolen many valuable articles from physicians. We advise our readers to be on the look-out for this person and allow him to wait in their office until a policeman is sent for.

Medical Department of Life Insurance.

THE INFLUENCE OF CERTAIN EMPLOYMENTS UPON THE HEALTH OF THOSE ENGAGED THEREIN.

By Dr. LUDWIG HIRT,

of Breslau, Germany.

Translated by R. Percy Alden, of New York.)

THE EFFECTS OF ZINC VAPORS ON WORKMEN ("BRASS-FOUNDERS' AGUE.")

Greenhow, Med. Times and Gaz., Vol. i. p. 227. 1812.—*Schnitzer*, Fieber bei Messinggiessern, Preuss. Vereins-Zeitung, N. F. V. 25. 1862.—*Husemann*, a. a. O. S. 929. 1862.—*Greenhow*, Med. Chir. Transact. xxv. p. 177. 1864.—*Lévy*, Traité d'Hygiène publique et privée, vol. ii. p. 929, ff. 1869.

The cause of the affection in question was for a long time an object of dispute: while Plaseller, who distinguished it by the name of "brass-workers' dust fever," believed that it existed in consequence of the inhalation of zinc-dust, Blandet, Becquerel, Greenhow and others supposed that it might be brought into connection with the vapors of zinc. The probability of this view will become almost a certainty by observing that workmen who are exposed to the influence of zinc-dust, without inhaling vapors, are never subject to the "brass-founders' ague."

It remains now only to ask, Whether the vapors of zinc alone, or together with those of other metals, cause a tendency to the disease? We have often noticed in various places that the workmen in zinc-furnaces, in other words, people who breathe scarcely anything but vapors of zinc, remain almost entirely exempt from the disease, while those workmen who are engaged in casting—brass-workers, brass-founders, girdlers, etc—acquire it very frequently.

Now, whether it is the copper fumes which are formed simultaneously with the fumes of brass, which work together to cause the origin of the trouble, or whether the ultimate cause of "brass-founders' ague" is to be sought in the arsenic which is contained in small quantities in the zinc, is not yet easy to determine, while we for our part do not hesitate to pronounce the "brass-founders' ague" to be an acute case of metal poisoning caused by the fumes of zinc and copper.

The author has twice in his own person, and repeatedly in brass-founders, observed the symptoms and course of the disease somewhat as follows:—

Some hours after a person has attended the casting a peculiarly uncomfortable feeling all over the body is noticed, pains in the back (more or less severe), and a general lassitude necessitating retirement from one's customary occupation; while the pains shift, now to this side, now to that, and annoy in the highest degree, there is nothing remarkable to be observed either in the pulse or in the respiration. However, in a short time—usually soon after the sufferer has gone to bed—chills set in, which soon increase to a violent ague lasting a quarter of an hour or longer; in such cases the pulse within half an hour or an hour reaches 100 to 120 beats per minute. A tormenting cough, with a sore sensation in the breast, appears, and a pain in the forehead, increasing more and more with the violent spasms of the cough, makes the situation unpleasant in the highest extreme. Soon, however—at most after a few hours—the turning-point of the disease is reached; profuse perspiration marks the beginning of the stage of defervescence, and during a gradual disappearance of the symptoms the sufferer falls into a deep sleep, from which he awakes either cured or at least convalescent—only a general lassitude and slight headache reminding him of what he has undergone.

Running its course in this way, the "brass-founders' ague" appears very frequently, and at least 75 per cent. of founders, etc., have to undergo it once or oftener.

Whoever has once had it, enjoys the pleasing prospect of getting it again at every casting. It probably never happens that one gets accustomed to the danger; only very few individuals, as a rule, enjoy immunity from it.

The *diagnosis* is at times difficult, if the moment of seizure be not known, and the mistake is commonly made of confounding it at its commencement with a violent attack of intermittent fever; its further progress will soon show the error. Further mistakes are owing to the rapidity with which the complaint disappears;—at the second visit of the physician, the patient is found restored to health,—scarcely conceivable!

The *prognosis* is absolutely favorable when no complications are present, and entire restoration of health follows, at the latest, in forty-eight hours.

The "brass-founders' ague" does not require any special treatment. Hot milk is given for the troublesome cough, and experienced founders partake of it in large quantities on the day of casting, under all circumstances.

No means of preventing the breaking out of the disease are of any avail.

THE EFFECTS OF VAPORS OF SALT ON WORKMEN.

Hezel, Fr., De Valetudine salis coctorum. Altorf, 1731.—*Halfort*, a. a. O. S., 606. Berlin, 1845.—*Trautwein*, Der Salinenprocess, die Arbeiter in den Salinen u. deren Krankheiten. Casper's Vierteljahrschr. Bd. VIII. S. 17. 1855.—*Hirt, L.*, Ueber die Gesundheitsverhältnisse der Salinenarbeiter. Wien. med. Wochenschr. 7. Jahrg., No. 88, 89. 1867.

By the term "vapors of salt" we mean the air prevailing in rock-salt mines, and in the boiling-houses of salt-works, and which may be recognized by a person unused to it by its salty taste. There is also to be mentioned here the air prevailing in the neighborhood of "drying-houses," chemically changed by the evaporation of salt-water—the "drying-house air"—which through a relatively considerable amount of salt particles is characterized by free muriatic acid, arising from the decomposition of the chlorate of potash of the salt-water. The influence which this salt vapor has upon the workmen has been frequently misunderstood and over-estimated. When we learn from Italian physicians, such as Ramazzini, Lanzonius of Ferrara, and others, that workmen become cachectical and dropsical from the inhalation of vapors of salt; when Daniel Drake ("A Systematic Treatise, etc., on the Principal Diseases of the Interior Valley of North America," etc., Cincinnati, 1850) informs us that the refiners in the American salt refineries suffer from diarrhœa and defective composition of the blood, these statements must easily excite our wonder, and cause us to reflect that in these diseases, if otherwise the observations of this widely extended professional research are correct, atmospheric influences are perhaps to be taken into consideration.

The condition of health of workmen breathing vapors of salt bears witness, as we have frequently had

opportunities of verifying, to the fact that the kind of air in question has absolutely no unfavorable effect on the organism, and that there are no diseases which are alone referable to this cause. Our researches, undertaken in this direction, refer to the rock-salt workers in Stassfurt (1872), and to the salt-mine workmen (driers and refiners) of Reichenhall (1867) and Schönebeck (1872).

Among the Stassfurt workmen the state of health is generally very good, and lung diseases especially are very rare; there is likewise nothing unusual to be observed in the way of diseases of the digestive organs; and only when a thick mass of powder-smoke is collected in the galleries, in consequence of heavy blasts, do the workmen complain of nausea, headache, etc.,—slight inconveniences, which certainly have no connection with vapors of salt. For actually harmful influences in this branch of industry, see Hirt, "Krankheiten der Arbeiter," vol. ii. p. 162.

The examination of the salt-miners furnished similar favorable results, especially that of the driers, who are not obliged, like the refiners, to work in a high, steady temperature, 82° to 89° Fahr., with considerable bodily exertion. While in consequence of this we noticed in the latter, occasionally, general lassitude, languor, indolence, a paleness of the face, etc., the state of health of the former, who live under the influence of vapors of salt, was certainly remarkably good. Neither diseases of the respiratory nor digestive organs were to be observed among them. On the contrary, their health is better and more lasting than that of any other class of workmen.

THE EFFECTS OF OIL-FUMES ON WORKMEN.

Ramazzini's Abhandlung, bearbeitet von Ackerman, Bd. I. S. 28 ff. u. Bd. II. S. 214 ff. 1780.—*Halfort*, a. a. O. S. 605. 1846.

In order to study the effects of fumes of oil upon workmen, and especially to determine whether, as a consequence, particular forms of disease are developed, it is necessary to distinguish between the fumes which the *fat oils* and those which *volatile oils* produce in the course of their extraction and manufacture.

Let us dwell for a moment on the former class, and if we take rape-seed oil as a specimen of the kinds of oil most frequently used, we shall find that in the reduction of this oil a peculiar smell is diffused all over the working-rooms, which is by no means agreeable to those unaccustomed to it. It moreover frequently happens that during the first hour of their stay, sensitive persons suffer from headache and nausea, and often vomit. From this fact we must not, however, conclude that any pernicious effect of the fumes is noticeable among workmen used to the oily atmosphere.

Ramazzini was the first (and is, doubtless, the only one) who has complained of the dangerous consequences of the fumes of oil, and astonished us with the information that the workmen suffer from coughs, choking-rheum, vertigo, and cachexy.

Our own investigations, which were made in very extensive oil-works, have in this particular led to an entirely opposite result, and we are not able to corroborate Ramazzini's assertions in the slightest degree.

On the contrary, it seems to us more than probable that the fumes found in oil-works possess certain curative influences, as, for example, they are able not only essentially to reduce bronchial catarrh, but also to prevent it. Individuals who enter the works weak in body, narrow-chested, and greatly disposed to catarrh, soon become sensibly stronger and able to withstand outside influences, such as change of temperature, etc.

These favorable changes, which, as we often have opportunities of observing, are produced in the systems of workmen during their employment in oil-works, we believe may be ascribed solely to the influence of fumes of oil.

Whether these observations which we have communicated may perhaps be of value, in a therapeutic point of view, we leave undecided.

The influence which the fumes of volatile oils exercise upon workmen manifests itself in quite a different way from that first described. While we take it for granted that the technical part of the process of manufacturing them is understood, let us observe that in this branch of industry there are still other influences besides those in question which are pernicious to health, and which require consideration, and it is possible that in this way the poorer state of health of the workmen can be accounted for. But the vapor of volatile oils by itself alone is not unimportant, even if our investigations have not been made to their usual extent, and furthermore have been confined to a few works in Leipzig, still they have assuredly taught us that, 1st. There is nothing to be perceived here of the favorable (?) effect of the fumes of fat oils; and, 2d. That certain conditions of ill-health, if they are not developed by, yet owe their origin to, the fumes of volatile oils. These appear to relate chiefly to the nervous system, and are soon discovered in general lassitude, headache, nausea, etc.

We can state nothing further concerning the relative frequency of these diseases among workmen, except that in the works visited by us, they certainly appeared very rarely. According to statements of workmen, the state of affairs seems to be essentially the same in other works which, for easily understood reasons, were inaccessible to us. Further investigations on this subject seem to be urgently needed.

THE EFFECTS OF FUMES OF TURPENTINE ON WORKMEN.

Roche, Ueber Vergiftung durch Terpentindämpfe, l'Union, 36. 1856.—*Marchal de Calvi*, Vergiftung durch Terpentindunst, l'Union, 32–35, 45. 1856, und Ibid. 150. 1857.—*Liersch*, Zur Vergiftung durch Terpentindunst, Casper's Vierteljahrschr., Bd. XXII. S. 232. 1862.—*Husemann*, a. a. O. S., 423. 1863.—*Chevallier*, Des dangers qui peuvent résulter du séjour dans les localités où l'essence de Térébenthine ou d'autres produits analogues se trouvent en expansion, Ann. d'hyg. publi. II., Sér. xx., p. 95. 1863.—*Eulenberg*, a. a. O. S., 453, 1865.—*Schuler*, Die glamerishe Baumwollenindustrie, Vierteljahrschr. f. öffentl. Gesundheitspflege, Bd. VI., Heft i., S. 103. Braunschw., 1872.

Among the so-called soft resins and balsams which produce the solutions of resin in volatile oils, there is none better calculated to interest us than turpentine. It is not only because it has found a widely extended use in manufacture and art, so that it figures in numerous trade-industries, but also on account of the influence which the handling of this substance exerts upon the health of the workmen;—a highly interesting study, to which attention was called half a century ago.

Patissier was the first who, in 1822, gave it as his opinion that people who were obliged continually to breathe the fumes of turpentine were apt to suffer from various disorders, especially coughs and attacks resembling colic.

Soon afterwards a few, then numerous observations

corroborated this opinion, and gradually, on every side, the conviction was created that the fumes of turpentine exercised an evil influence on the system, and were perhaps even directly poisonous.

Although Marchal de Calvi never entered upon casuistic discussions, and although their number was by no means inconsiderable, yet the question would not have been soon decided, had not trustworthy observers (Chevallier, Lévy) established that they had discovered a remarkably fine condition of health in works where turpentine fumes abundantly prevailed, and that no traces of colic, nervous troubles, diseases of the respiratory organs, etc., were there to be found. After the path of physiological experiment on animals had been trodden (by Liersch) without obtaining any other decided result than that the fumes in question exercised an unmistakably evil influence on small mammals, even so far as to cause death in consequence, it seemed to the author to be eminently proper, departing from the usual custom, to use human beings themselves as objects of experiment, and to study the effects of the various kinds of inhalations.

In order to decide rightly upon the causes of ill-health arising from the breathing of fumes of turpentine, we must distinguish the effects produced upon the system by inhalations of a comparatively great quantity of turpentine, lasting but for a short while, from those of long-lasting, often-repeated inhalations of but comparatively small quantities of turpentine.

Inhalations lasting but for a short time have the following effects, as the author has observed them in his own person, as well as in a number of workmen: While at first they accelerate the respiration and circulation (pulse 92, breathing 26, in a minute), there soon follow slowness of breathing and later slowness in the movement of the heart. After the inhalation has lasted several minutes, dull headache, tingling in the ear, an inclination to vomit, appear. After the inhalation is concluded (gauze-mask, 20–25 drops of the oil of turpentine, inhaled from 10 to 12 minutes), considerable lassitude, nausea, sickness, and inclination to vomit remain; the odor of violets in the urine was not noticed. From these symptoms it follows that inhalations of short duration, in which a comparatively small amount of turpentine is absorbed by the system, always exercise an evil influence on human beings (of course excepting cases where it is employed therapeutically), and at first the breathing and the movement of the heart will be affected, and with larger doses the brain, and perhaps the spinal marrow also. Stupor occasionally precedes a "stage of exaltation."

The influence which long-continued inhalations (lasting uninterruptedly for an hour at a time and often repeated) exercise on the organizations of workmen we may state from observations made by us on twenty-one workmen, as follows:

1st. In a quantity of cases (about twenty-five per cent.) the fumes act harmfully, principally on the organs of respiration. Some weeks after beginning work a cough appears, accompanied by pain in the breast; the workmen become thin, and (provided that their labor has been uninterrupted) show after some months all the symptoms of a chronic destructive process in the lungs.

In these cases the opinion of Lombard is undoubtedly correct, that pulmonary consumption often occurs in consequence of breathing the fumes of drying oil and varnish.

2d. In a few cases a lasting pernicious effect upon the canals of the stomach and intestines is produced.

We think that many of the assertions made as to this should be received with caution, because the employment of turpentine often supposes the simultaneous action of lead upon the system (varnishers, painters, etc.), and the symptoms resembling those of colic which then appear, such as constipation, with severe pain in the stomach, may be more readily ascribed to the influence of lead than to that of turpentine.

In the twenty-one cases examined by us, no one complained of serious disorders of the digestive canal arising from the breathing of fumes of turpentine, yet the possibility of such a connection is not to be questioned.

Schuler (compare Lit.) has noticed cases of that nature.

The uropoietic system is sometimes sympathetically affected. Ischuria, as well as hæmaturia (Harris and Colton), although rare, have been several times observed after inhalation of turpentine.

3d. As to what concerns the effects on the brain and spinal marrow, these inquiries, in view of the symptoms just described, must be of little importance, for even if most workmen, at the commencement of their labors, suffer from headache, muscæ volitantes, tinnitus aurium, etc., yet these are symptoms which, unless they increase so much as to cause anxiety, soon disappear.

4th. In about ten per cent. of all cases, where the mere inhalation of the fumes of turpentine was under question, we noticed absolutely no pernicious effects whatsoever caused thereby. Among our workmen were two (one house-painter and one color-grinder) who had worked for a long time in an atmosphere of turpentine without being in the slightest degree affected. Here belong the observations of Lévy, and the (not very numerous) cases of people inhabiting rooms freshly painted in oil without any injury to their health.

If we now connect together the results of our observations, it will be found that long-continued, oft-repeated inhalations of fumes of turpentine but slightly concentrated, often cause no evil effects whatsoever; should they however do so, they will affect the lungs most frequently and severely, less frequently the stomach, intestines and kidneys, and the brain and spinal marrow never.

NOTE.—The fumes which asphalt—a black shining resin, made by gradual oxidation of petroleum—creates in its manufacture, were for a long time thought to be prejudicial to the health. In the work of Krauss and Pichler (Encyclopädisches Wörterbuch der Staatsarzneikunde, Bd. I. S. 158) we find an article expressing itself somewhat in that sense; and also in a treatise on the boiling of asphalt in the open air (Archiv der Deutschen Med. Gesetzgebung, III. 24), we read something similar. Nevertheless this is not the case; the fumes which arise in boiling asphalt (for the repairing of pavements, etc.), cannot be considered as injurious to health, as observations in English and Scotch establishments have taught us. Even in the case of the workmen who are employed at the kettles, and who are most exposed, there is too small an amount of irritation produced by the fumes of asphalt on the organs of respiration, to cause any deterioration of the health. On the other hand, we have frequently observed, as for instance at G. M. & Co.'s works at Glasgow, where one hundred workmen are constantly engaged with asphalt, that these fumes exert a healthful influence on bronchial catarrhs, which have sprung from causes occurring at other times, and that, in consequence of this, patients suffering from protracted catarrh have been ordered by their physicians to try an atmosphere of asphalt. Let it be remarked

in passing, that their labor, which is performed for the most part in the open air, is not only consistent with good health, but rather contributes to the fine physical condition of the workers in asphalt.

THE NORMAL MAN.

By EDWARD H. SIEVEKING, M.D.*

Were insurances effected upon every member of the community indiscriminately, and did every company take its due proportionate share, the risk and the result could be calculated with absolute certainty, as the duration or prospect of life of each member of the community can be accurately determined. But the nature of our social relations makes it necessary that the lives taken by insurance companies should be selected lives, and that they should approach as nearly as possible to a standard of perfect health.† Although in all well-regulated States the statistics referable to the entire population are reliable even to minute details, the individual is subject to accidents which cannot be foreseen or calculated, and therefore, as only a limited number of people appreciate the value of life insurance, and there are always many who would be willing to benefit themselves to the detriment of the insurance company, it is necessary that the latter should be on its guard against involuntary deception or actual fraud. A company that took no precautions as to selecting average lives, would, as has been repeatedly the case, soon find its assets incapable of covering its liabilities. And one of the first conditions of successful life insurance business is, that there should be no doubt as to its being at any time able to fulfil its engagements towards those who have invested their money in premiums with a view to securing for themselves or their successors a stipulated benefit.

It is equally to the interest of the insurer and the policy-holder that every guarantee should be obtained that the latter offers all the conditions of good health, which means that he possesses no hereditary taint, and that his organs and functions are in a condition to enable him to bear the wear and tear of life without unnecessary detriment. He should approach as nearly as possible the ideal or typical man, the limit of whose age may reasonably be assumed to lie somewhere between 70 and 80.‡ Practically it is impossible to insure perfect health in a large number of insurers, though Dr. Fleming and others show that in the aggregate their rate of mortality is lower than that occurring among the general population. The influences that we are all subject to, owing to the hereditary impress we receive before birth, the neglect of sanitary laws, the friction we undergo in our passage through life, the labor and anxiety associated with existence, impair in the individual, to a great extent, the standard of perfect health, which theoretically may be attained. For this deviation the tables of insurance premiums are calculated to make due allowance; for if there were not a proper margin for the accidents of life, no insurance business could be safely conducted, and it is, even with that condition, necessary to have large averages, in order to secure permanence and stability.

Before proceeding to the consideration of those elements which impair the prospect of life and diminish the working capabilities of our organism, it may be well to devote some space to the examination of the conditions which constitute perfect health, and of the means at our disposal to determine their existence. It is the departure from these conditions that constitutes the real difficulty of the medical referees of life insurance associations, who are bound to reverse the legal theory that every man is innocent until he be proved guilty, and to assume that every candidate for insurance is more or less unsound until his physical health is conclusively established.

We cannot regard the individual as self-contained. From the earliest history of man the influences imparted by progenitors to their descendants have been recognized; and though such influences may be neutralized or modified by training and education, they will ever imperatively demand a large share in the estimate of individual quality and character. The Mosaic account of the origin and development of the Jewish race has a red line of genealogical doctrine running through it, which presents features of the greatest interest to the student of mankind; while the "Fortes creantur fortibus et bonis" of Horace is only one of the many instances of a recognition of the same principle by profane writers of antiquity, which has received larger and more scientific treatment by philosophic inquirers of recent times.

For the purposes of life insurance it is necessary to determine the existence and the character of hereditary influence from three aspects. The evidence obtainable may be derived from preceding generations, from collaterals, and from descendants. It has been too much the custom to pay regard only to the vital power of progenitors; but, important as this point is, we shall find, when discussing special morbid taints, that the health of collaterals offers very valuable indications as to the health of an insuree, which are not afforded or not accessible when the former alone is examined. The condition of descendants, in the nature of things, does not so frequently assist in determining the health of their predecessors, because, though theoretically of similar import, the age of insurers generally militates against this element becoming an item in the calculation of their vital power. Apart from the actual health of the progenitors, physiological conditions come into play, that frequently determine the viability of their offspring, some of which at least are readily ascertainable. To these belong the relative ages of the parents at the time of the insuree's birth. Great disparity of age is justly regarded as exercising a prejudicial influence, even though other points are favorable. Blood relationship, again, which in this country is not a bar to marriage in degrees that physiologically are objectionable, leads to the production of a sickly offspring, which may not at the time of insurance have exhibited any failure of power, but which nevertheless would be less capable of resisting morbid influences, to which they must sooner or later be subjected. It is this power of resisting disease, the *vis insita*, to which in all cases the medical referee's attention requires to be specially directed. The actual malady or morbid taint is comparatively easy of detection, but the gauge that is to test the insuree lies in the means of estimating his ability to undergo the heat and burden of active life,

* An extract from his work entitled, The Medical Adviser in Life Assurance. London, J. & A. Churchill. 1874.

† For details connected with, and in illustration of, this train of thought, the reader will do well to refer to an admirable treatise by Dr. J. G. Fleming, of Glasgow, entitled Medical Statistics of Life Assurance. Glasgow, 1862. The work is unfortunately out of print, and we have had much difficulty in obtaining a copy for reference. In a careful analysis of the deaths and causes of death occurring in thirty-six years in the Scottish Amicable Society, Dr. Fleming places before his readers numerous interesting and important conclusions, some of which we shall take the opportunity of reproducing in our pages.

‡ This agrees with the scriptural threescore years and ten; but it is to be observed that in Genesis (vi. 3) the days of man are promised to be one hundred and twenty years. Flourens and Buffon are both of opinion that the natural term of existence is one hundred years.

and to ward off or bear with impunity the noxious influences which he cannot altogether escape.

In the increasing intercourse among the nations of the world, and the intermarriage between different races, considerations may be expected to arise, which, with the spread of life insurance to the dependencies of Great Britain, will merit future discussion. The deterioration of race in various parts of the globe has already attracted attention, and it is an acknowledged fact that the burgher population of Ceylon, descended from the earlier Dutch settlers, no longer presents the sturdy characteristics of their forefathers. As yet, fortunately, we possess no analogous declension in any British community; but the locality of birth, even where the parents are healthy, already deserves the attention of the medical referee in the examination of English lives. Whether, in the course of time,* a change in the habits, and the adoption of hygienic measures not yet appreciated, may modify the effect of climate, remains to be seen; but for the present it is an undoubted fact that the healthy children of healthy English parents, born in tropical regions, after a few years pine away, and, unless sent to temperate zones, lose the vigor which is their inheritance. The longer their return is delayed, the greater will be, cæteris paribus, the impairment of vital power, which, apart from actual disease, will tend unfavorably to modify this susceptibility to disease, and to diminish their prospects of longevity.

As regards temporary residence in various countries, it is questionable whether, in the present state of social intercourse, and with the improved methods of communication and sanitary appliances of all kinds, it can be considered as affecting life insurance prejudicially. Messrs. Bailey and Day† show, in opposition to Dr. Guy, that the members of the peerage enjoy a high average duration of life, and remark that the male lives of that class enter the army and navy in large numbers, travel extensively, and are more exposed to what assurance offices consider extra risks than the middle classes. They infer that differences of climate have less effect on human mortality than differences of occupation and position in life, and that, as the offices do not attach much importance to the latter, they might relax somewhat in their estimate of the former. We willingly adopt the corollary without the reason assigned, for we hold that offices ought to be more particular than they are in considering the influence of occupation on the expectation of life.

Physically, as well as morally, the child is undoubtedly "the father of the man." Everything, therefore, that aids in the normal growth of the infant, materially affects its future well-being. Hot-house plants, and plants over-stimulated by rich manure, are the exact prototypes of children reared in a manner calculated to anticipate the normal periods of development. The laws of nature are not difficult to read that bear upon this matter; and were it possible to go into the question of early training of our applicants for insurance, we should doubtless be able to fix, with greater certainty than we now possess, their future chances of life. I allude more particularly to the feeding of infants,* to the prejudicial influence of hand-feeding, adopted for various reasons to which it is unnecessary to allude here, in lieu of the only physiologically correct food for infants, the maternal milk. During the later periods of childhood, the employment of artificial stimuli of all kinds, physical, emotional, and intellectual, largely impairs brain-growth, muscle-growth, blood-growth, either by a development of one part of the organism at the expense of another, or by directly stunting the entire process of nutrition.

We need scarcely dwell longer on the aspects of childhood in reference to life insurance at present. Although some offices present an attractive feature with reference to early insurance, by which the premiums are returnable if death occurs before the age of 21, this very arrangement renders as close an investigation into the antecedents of the child less necessary than it becomes during the periods of life after growth is completed, and when applications for insurance are most largely made. But when manhood is established, the question of the extent to which, within the limits of health, variations of structure and function may exist, become of paramount importance; and it is here that we particularly look for a standard of comparison by which to determine the departure from the typical man, without recognizing a positively morbid condition.

The remarks that follow are chiefly the result of observations made upon members of that somewhat complex race to which the modern Briton† belongs; and as he is not regarded as inferior to any of his contemporaries, whatever is true in him may be applicable to mankind at large.

The period of complete manhood is fixed by law at 21; but physiologically this is certainly not universally correct, for although development may be regarded as accomplished in every respect at this age in the healthy English female, and vertical growth may have terminated even in the male, a man's vital power cannot be regarded as having attained its maximum development until about the age of 30.‡ For some years after the youth has ceased to grow, in the ordinary sense of the word, the dimensions of his chest, the great index of vital power, continue to expand, and numerous are the instances derived from military experience, showing that recruits at the age of 20 are unable to undergo the fatigue of active service that is borne with impunity by men of a more mature age§. They are literally not as yet well knit

* That such an anticipation is reasonable is borne out by facts already at our disposal: thus it is found that although, according to the sanitary report of the Bengal Presidency for 1871, the death of European children in the plain of India, amounts to 91·4 per 1,000, the mortality at a school in Rajpootana, in existence since 1854, on Mount Aboo, has only been 8 per 1,000. The site of the school is 4,500 feet above the level of the sea, and enjoys a mean temperature of 69° F. In order to show the contrast between the ordinary mortality of English children brought up in England and India respectively, we annex the following tabular statement of their death-rates, compiled by Dr. Fayrer (*Brit. Med. Journ.*, May 3, 1873):

	England.	India.
Under five years	67·58	148·10 per 1,000.
Five to ten years	8·80	17·78 "
Ten to fifteen years	4·98	11·51 "

We experience some doubt as to these numbers being correct, as the mortality for the children in England is manifestly too low; but Dr. Fayrer's authority stands too high to doubt the general results to which the table points.

† On the Rate of Mortality amongst the Families of the Peerage.—*Assurance Magazine*, July, 1861.

* Those who wish to study the laws governing the nutrition and development of the child, are particularly referred for valuable information to Dr. Edward Smith's elaborate work on Health and Disease, as influenced by the Daily, Seasonal, and other Cyclical Changes in the Human System. London, 1861.

† This term is used advisedly, because there are observed differences between the three chief divisions of the inhabitants of Great Britain; and if the term Englishman were employed here, it might lay the writer open to the imputation of wishing to ignore features indicating a physical superiority of the Scotchman or the Irishman. For the purpose in view, such a distinction would be unnecessary.

‡ Quetelet (Sur l'Homme et le Développement du ses Facultés, Paris, 1835) shows that the growth of man cannot be regarded as universally complete at the age of 25; see his Tables of Measurement taken on inhabitants of Bruxelles, vol. ii. p. 13. Quetelet also gives tables showing the completion of female growth at 20, and the completion of male growth at 30.

§ For detailed information upon this point, the reader is especially referred to Professor Aitken's work, On the Growth of the Recruit: 1863.

together. Several important bones are not perfectly consolidated, and it may be specially mentioned that the sternum, which has to bear so great a strain in labored respiration, and is specially taxed by the weight of the soldier's knapsack, is not converted into a single plate of bone until after the thirtieth year. It is not until the sixth quinquennial period of life that our leading anatomical authorities find that the following events, connected with the consolidation of the skeleton, took place:—1. Completion of the vertebral column; 2. Completion of the sacrum; 3. Coalescence of the third with the second piece of the sternum; 4. Completion of the ribs; and 5. Coalescence of the haunch-bones with their crests.

The average height of an Englishman brought up under favorable circumstances is 5 feet 9¾ inches, which is notably above that of the average Belgian, Frenchman, or Italian. The height of the average English female appears to be about 5 feet 2 inches.* It would be difficult to fix the limits at which height and health are incompatible. The downward range is certainly larger than the upward range, which appears due to the fact that the vital organs, the heart, and the chylopoietic viscera do not keep pace in development with the muscular and osseous systems of persons exceeding the normal elevation. We more frequently meet with people of diminutive stature, with a perfectly equable development of external and internal organs, who, for purposes of life insurance, would offer every reasonable guarantee for their viability, than with men and women materially exceeding the average stature, in whom some invalidating element in the organs of sanguification, circulation, and innervation may not be traced. Cæteris paribus, the small person is more easily nourished, and if, at the same time, the respiratory function is well carried on, which we shall shortly see is one of the most assured signs of vigor, he is on the whole better adapted for the warfare of life than his overgrown neighbor, to whom, possibly, he may look up with envy.

We will next examine the bearing of the weight of the individual upon health. Here we find, normally, a progressive increase from birth to the decline of life, which must not be regarded as identical with development, as we have seen that the full growth of the body reaches its acme in the third decennium of life. The increase of weight that takes place at a later period is due to the accumulation of fat under the skin and in the cavities of the body, and, as is well known, very commonly assumes morbid proportions, which often affect the life insurance value of the individual. From birth† the male sex exceeds the female, both in size as well as weight, and this prevails throughout life excepting, according to Quetelet,‡ at the age of 12, when the weight of both is the same; but it appears, according to the same authority, that the female attains her maximum of weight at a later period of life than the male.

According to Liharzik,§ the normal growth of the human body is completed at the end of the twenty-fifth year. He estimates the mean height of a "growing lad" at 18 years at 163 centimètres, or 64.17 inches, and that of a man who has completed his normal growth at 68.9 inches.

The average weight of a young Englishman of 21 is 151 lbs., but the table in ordinary use to determine the normal height and weight of applicants for insurance is given for the age of 30, at which there is already an increase upon the former estimate; it will also be seen that the average increase per inch of stature above 5 feet is 5½ lbs., although the range of variation at different heights is greater than might have been supposed *a priori*.

Although the standard supplied by the table in general use may be regarded as a valuable indication of the individual's health, it must not be relied upon alone as a test of his suitability for insurance. Considerable variations occur within limits that do not impair the prospect of longevity; but where they are marked, greater care is requisite to determine the value of other points that bear upon the viability of the person under examination. Such variations depend upon race, employment, age, habits of life, sex, and temperament, which, from the absence of sufficient data, it would be impossible to formularize, but which, nevertheless, are roughly taken into consideration in estimating the value of a life. We all know that a Scotchman does not yield in bodily or mental vigor to the Englishman, yet experience teaches us that the average weight of the former is less than that of the latter.* Dr. James Forbes, when Professor of Natural Philosophy in Edinburgh, examined 800 students with reference to their physical development, distinguishing the natives of England, Scotland, and Ireland. He found the law established that development in every respect increases between 14 up to 26 years of age, but that the increase became slower as the age advanced. Our Scotch friends will be pleased to hear that, tested by Regnier's dynamometer, Scotchmen were superior to Englishmen in tractile power. This being measured by pounds, gives for

Englishmen at the age of 20 to 55,	336 to 384 lbs.
Scotchmen	"	"	374 " 404 "
Irishmen	"	"	397 " 413 "

Sedentary occupations, with an ample food-supply, tend to increase the weight, while it is reduced by employment involving continued open-air exercise and a tax upon the muscular system. An undue diminution of weight would be regarded with more suspicion early in life, as indicating impaired nutrition, and taken with any symptom, not by itself adequate to raise a doubt, that tended in the same direction, might justify rejection. On the other hand, an abnormal elevation of weight when manhood is established, though compatible with health if the occupation and mode of life be healthy, may imply a tendency to fatty degeneration, or to apoplectic affections where the concurrent circumstances are not equally favorable. In all these questions a certain latitude is unavoidable, and what is technically called circumstantial evidence must guide the inquirer in arriving at a conclusion. Dr. Purdon, in a recent pamphlet on life insurance, following Dr. Brinton,† allows a variation of 20 per cent. as compatible with health. This may be exceptionally true, but, practically, it is found where early deaths occur from constitutional disease that a smaller variation than this implies ought, at the time of insurance, to have attracted attention and commanded an increased rate, although no other indication of a hereditary or constitutional taint existed. Our own experience leads us more and more to regard the table as a valuable aid in determining the value of an applicant's life, and we regard with suspicion any material departure from the law it appears to involve.

* Cowell's Factory Reports, quoted by Quetelet, vol. ii. p. 18.
† Quetelet, vol. ii. pp. 8 and 35, *et seq.*
‡ Vol. ii. p. 48.
§ Law of Increase, by F. B. Liharzik, M.D.: 1862. See also Aitken's Growth of the Recruit, and Dawson in *Statistical Journal*, March, 1862.

* Aitken's Growth of the Recruit, pp. 44 and 71.
† On the Medical Selection of Lives for Assurance, 2d edition, 1856.

Any sudden change of weight demands still more careful consideration than a habitual departure from the normal standard. It may, as in an obese person, be the result of an illness that restores a healthy state of things, but it is more frequently the forerunner of disease; when it takes the form of reduction, we look for some morbid taint that induces wasting, as consumption; where it runs in the opposite direction, the prospect of life may be affected by alcoholism, by degeneration of the vessels, leading to cardiac, renal, or cerebral mischief, or by some analogous impairment of the nutritive powers.

Of all the points bearing upon the present health and the future prospects of an individual, there is probably none that exercises a greater influence and more deserves our attention, than his respiratory power as indicated by the development of his chest and its contents. It is fortunate that we possess more perfect means of gauging the power of the thoracic viscera, than are applicable to any other viscera of the body. We can not only measure the external dimensions of the chest and determine the physiological movements of its walls, but we are able to watch the process carried on within, by the stethoscope and by percussion, by the spirometer, and by the sphygmometer, with results that amount to almost absolute certainty. In the ordinary inquiries necessary for life insurance, it is scarcely practicable to bring all these methods of research to bear upon every candidate for insurance. But there can be no doubt that, were we not afraid of frightening the customer, or were time no consideration, a more careful application of the various tests of pulmonary capacity would prevent many lives from being passed as normal that now become claims at an earlier period than the medical examiner and his Board of Directors had reason to anticipate. Respiration and life may be regarded as synonymous, and we find that vital power may be measured by the manner in which the functions of respiration are carried on. Hence the stress that medical men, and even popular opinion, lays upon the value of a well-developed chest, which affords an indication of what Mr. Hutchinson was the first to term the vital capacity of the lungs. In ordinary quiet respiration the thorax is neither fully expanded, nor fully emptied of the contained air. To measure its entire capacity—*i.e.*, to determine the whole amount of air which it is capable of taking in and discharging in one respiratory act—it is necessary that a forced inspiration and a forced expiration should be made. Even after the latter act, a portion of "residual air" remains in the lungs, which is entirely independent of the will, and always present in the chest. Mr. Hutchinson terms the air of ordinary respiration "breathing air;" that of forced inspiration "complemental air;" and that of forced expiration "reserve air." The following table shows how widely previous observers had differed as to the quantity of air belonging to each of these divisions. They regarded

Residual air as ranging	from	40	to 260	cubic inches.
Reserve air	"	" 77	170	"
Breathing air	"	" 3	100	"
Complemental air	"	" 119	200	"
Vital capacity	"	" 100	300	"

These discrepancies were due to Mr. Hutchinson's predecessors not having had regard to a variety of collateral circumstances which ought to be taken into account in estimating the process of respiration. These are especially the power of the muscles concerned in respiration, the circumference of the chest, the height and weight of the individual, the pulse, the number of respirations, and the age.

For a description of the methods, and especially of the spirometer, an instrument for measuring the air expelled during expiration, as well as for many details of great interest, we must refer the reader to the original paper by Mr. Hutchinson. It will suffice for the purpose of the present work to extract some of the chief practical results which he has attained.

The mean results of spirometrical measurements of the vital capacity of 1,923 men, belonging to different classes of society, arranged according to height, together with their mean weights, are compiled in the following table, from which it will appear that there is a definite increase of vital capacity closely proportionate to the increase in height:

Mean Vital Capacity of 1,923 *Men belonging to different Classes of Society.*

Under 5 ft.					125	cubic in.	92·26 weight in lbs.
5 ft.	0 in.	to 5 ft.	1 in.		175	"	115·52 "
5 "	1 "	" 5 "	2 "		177	"	124·33 "
5 "	2 "	" 5 "	3 "		189	"	127·86 "
5 "	3 "	" 5 "	4 "		193	"	138·01 "
5 "	4 "	" 5 "	5 "		201	"	139·17 "
5 "	5 "	" 5 "	6 "		214	"	144·93 "
5 "	6 "	" 5 "	7 "		229	"	141·29 "
5 "	7 "	" 5 "	8 "		223	"	152·59 "
5 "	8 "	" 5 "	9 "		237	"	157·76 "
5 "	9 "	" 5 "	10 "		246	"	166·40 "
5 "	10 "	" 5 "	11 "		247	"	170·86 "
5 "	11 "	" 5 "	12 "		259	"	171·45 "
Over six feet					276	"	218·66 "

The mean for all heights being 217 cubic inches.*

When vital capacity is compared to weight, without reference to height, we fail to find the same progressive ratio of the respiratory power; thus the mean vital capacity of 147 men weighing 11 stone was 225 cubic inches; while that of 42 men of 14 stone only showed an increase of 8 cubic inches; so that, if there is, as we believe, a correlation between vitality or vital power and vital capacity, the man of lower weight has, cæteris paribus, the better prospect of longevity.

The vital capacity is found to increase from the age of 15 to 35, whereas from 35 to 65 it is decreased in the progression of 19, 11, and 13 cubic inches. It is remarkable, that although there is an exact relation between the circumference of the chest and weight, with which it increases in the exact arithmetic progression of 1 inch for every 10 lbs., Mr. Huchinson was unable to find any such definite relation existing, as might be reasonably inferred, between the circumference of the chest and vital capacity. This result is so much opposed to the teachings of anatomy and vital dynamics, that although we cannot doubt the correctness of Mr. Hutchinson's observations, we think there must be some underlying fallacy dependent upon unobserved influences, or upon an insufficiency in the number of cases examined. Some of the points in his investigations have been confirmed in a remarkable manner by those of Dr. Balfour,† to whose researches we shall have an opportunity of alluding again, when we examine the bearing of spirometry upon chest-disease in connection with life insurance.

Very few remarks on the organs and functions of the body that we have not yet alluded to will bring to a close what we have to say in this chapter on the subject of the average man. There are no special tests by which we determine the healthy condition of the brain, or the abdominal viscera, as bearing upon life insurance. The absence of any morbid taint, which will form the subject of future chapters, must be taken as negative evidence of health, which is otherwise in-

* The weights in the above table are the results obtained from a different and larger number of men than those examined for their vital capacity.

† Contributions to the Study of Spirometry, by J. G. G. Balfour, M.D., F.R.S.—*Medico-Chirurgical Transactions*, 1860.

dicated by those evidences of normal development which we have recently discussed.

The decline of life commences at periods which vary with the variations of hereditary and acquired vigor of the individual. Any exhausting influences that sap the powers of innervation or nutrition in youth or manhood will cause a premature senility, which, without actual disease, impairs the prospect of life of the individual. As a general rule, it is found that persons who have borne the battle of life well, and have passed the climacteric unscathed, are good subjects for insurance. The higher rates are, of course, calculated for the probable duration of life, but the casualties from unforeseen disease are smaller than occur during the earlier decennia. Women have passed the dangers incidental to their sex, and men are no longer exposed to temptations and dangers which beset them in the heyday of youth and early manhood.

Miscellaneous.

Longevity.—Sir Duncan Gibb, M.D., LL.D., then read a paper upon "Longevity at Five Score Eleven Years." He said he had brought forward nine examples at previous meetings of the association of persons who had overstepped the century by several years, and now his tenth instance was that of a female still living at Tring, in Hertfordshire, who attained her hundred and eleventh birthday in April last. Tables were quoted containing 84 instances of persons whose age extended from 107 to 175; 40 of these were under 130, and 44 above that age, and the author considered that three-fourths of the total number might be taken as correct. The proof of that was the instance he brought forward of Mrs. Elizabeth Leatherland, now alive and in her 111th year, her baptism being recorded in the register of the parish of Dover, in Kent. This was confirmed by the drowning of her son and his family, and other persons to the number of 37, at Hadlow, in Kent, in 1853, in the hop country, by a catastrophe mentioned and described in the papers of the time. Her son was then fifty-nine, and if now alive would have been eighty, his birth occurring when his mother was twenty-nine or thirty. Other corroborative circumstances were stated, clearly establishing the great age of the old dame, who was of gypsy descent. The author then described her condition, the result of a careful personal examination at Tring, in October, 1873. She walked with the aid of a stick, was short in stature, bent with age, complexion brownish, countenance a series of thick folds, and she had several sound teeth. She chatted away continually in a clear, distinct voice, and was in possession of all her faculties, though somewhat impaired. She was a little deaf, and took snuff; her skin was as soft as velvet, and her hair quite gray. She was thin, and the muscles of her neck stood out in bold relief. All her internal organs were in perfect health—lungs, heart, etc.—and her pulse was as regular and as soft as in a girl of eighteen. In fact, the changes of old age as met with in persons from seventy to eighty had not taken place in any of the tissues of the body, being thus similar to the nine other cases examined by the author. She was, of course, feeble; but, taking all things together, that did not prevent her reaching to her present exceptionally great age. Her age, the author said, taught us two lessons—one was the absence of senile changes for the most part in centenarians, which was the chief reason of their attaining to such a great age; the other the occurrence now and then of instances wherein even six score years is reached, if not more. To ignore all past cases of extreme ultra-centenarian longevity because we cannot get at their proofs at the present day, he considered unphilosophical and unscientific, for there existed as conscientious and painstaking inquirers after truth then as exist now, whose statements and recorded facts must not be wholly ignored, as every honest investigator well knows.—*The Doctor.*

Recent Action of Physicians in Germany.—One of the principal tasks of the German Medical Association, during its recent session at Eisenach, June 10, 1874, was to remove, if possible, the grounds for the unpleasant relations which have hitherto existed between the medical examiners and the life insurance companies. As is well known, this feeling of dissatisfaction had reached such a pitch that a number of medical societies, especially those of the Grand Duchy of Baden, passed resolutions refusing out-and-out to furnish family physicians' certificates to life insurance companies. By mutual concessions on the part of the companies as well as of the physicians, it was decided at Eisenach to abide by the following rules:—

1. The written consent of the applicant was invariably to be obtained before calling upon the physician for a certificate; and this consent was to be so worded that the physician would feel himself at full liberty to testify without reserve regarding the applicant's past and present physical history.

2. The printed questions of the certificate were to be framed in such a way that the physician could answer them without having an interview with or examining the applicant.

3. The physician was invariably to send his certificate directly to the main office of the company, and under no circumstance to deliver it to an agent or any third party.

4. This certificate was to be considered by the company as a confidential communication from the physician.

5. The regular fee (5 reichsmark = ?) for this certificate was to be paid *in all cases* by the company.

Upon this basis peace has at last been restored between the companies and the physicians.—*Deutsche Versicherungs-Zeitung.*

In the meantime a Committee appointed for that purpose is preparing a form of application and medical examiner's report, which, if adopted by the Chamber, will prove an important step toward collecting valuable medical statistics. Our only regret is that a blank similar to the one now under discussion was not put in use years ago, as in that case we should now be able to work out the answers to many interesting medical questions.

Inebriety and Insanity.—According to the most recent reports of the Scotch Insane Asylums, out of 615 cases of insanity, 149 (24 per cent.) were demonstrably due to the immoderate use of alcoholic drinks. These figures show how great an importance life insurance companies should attach to moderation in the habits of those whom they propose to insure.—*Deutsche Versicherungs-Zeitung.*

The Chamber of Life Insurance.—No decision has yet been reached on the different medical questions which have been brought before this body for consideration. An adjourned meeting will be held during the present month, when the discussion of these questions will be resumed.

Original Lectures.

AN OUTLINE OF THE PHYSIOLOGY OF THE NERVOUS SYSTEM.*

By E. C. SEGUIN, M.D.

GENTLEMEN:—In thinking of a subject to present to you in an introductory lecture, it occurred to me that a good one would be a sketch, very much condensed, of the anatomy and physiology of the central nervous system, to serve as a basis upon which we can, during the winter, build up a knowledge of diseases of the brain. I shall be very brief upon the individual heads of the lecture, wasting no time upon matters which are not capable of bearing a logical relation to pathology.

Before entering upon the subject proper, I wish to say a few words, intended to give you a clearer idea of the relation of medical to general knowledge. I mean to warn you against the error which it must be said some of the books in your hands tend to strengthen and perpetuate, viz., the separation of physiology from pathology, and the confounding of the latter with pathological anatomy. If we look at the matter from an extra-medical or philosophical point of view, we are led to classify our knowledge of the animal body into two categories: statical and dynamical knowledge. In other words, we study the animal organism and its parts in a state of rest, and in a state of activity; we observe the form and constitution of parts, and determine their properties and functions.

The study of the human body and its parts in a state of rest is called anatomy, in the broad sense of the word, making it to include chemical and microscopical analysis. Anatomy is spoken of as normal (with many subdivisions) when it describes the healthy parts and tissues; as pathological or morbid when it treats of the changes produced in tissues and parts by disease.

Our dynamical knowledge, embracing the study of the properties and functions of the parts we have anatomically analyzed, is called physiology; and this must, like anatomy, be separated into two great subdivisions—physiology, strictly speaking, and pathological (or morbid) physiology, or pathology. The activities we observe in abnormal (pathological) states are not different in kind from those which pervade the organism in health; nor are the laws of derivation and utilization of these activities different from the laws which operate in the normal body. By close analysis we find that in diseased states, as in health, physical and chemical laws govern the frame, and that essentially the results of their operation are the same. It can, I believe, be demonstrated with all but mathematical exactness, that the great law of conservation and correlation of force is supreme in the disordered and in the perfect animal organism. There is and can be no entity of disease, no demon. Even therapeutics can be brought into accord with this conception of medical knowledge; for our medicines and remedial agents are only means by which we aim to act upon the human body in such a way as to modify the shape or constitution of its parts, and to alter the mode of activity of its tissues and organs. And although the *modus operandi* of most medicines is obscure as yet, I think it not rash to say that medicinal agents do not act in any supernatural or occult way, but by the laws of physics and chemistry.

The study of the physiologist, and of the pathologist as well, begins with the nutrition of simple tissues, single cells, or even masses of protoplasm; and upon such a study, as a basis, there is built up the more complicated and elaborated knowledge of the activities of the human body which the practical physician needs so much at the bedside.

A consideration of what I have said will, I trust, lead you to admit two propositions: first, that we physicians are in reality naturalists, studying what we call disease by natural and scientific methods; second, that the most excellent physician must be the man who (contrary to a vulgar prejudice), together with a practical turn of mind and a sympathetic nature, has the greatest amount of scientific knowledge at his command.

I have thus apparently gone out of my way in order to help you in viewing this lecture as a logical whole, an imperfect attempt to give you a guiding plan in your studies of diseases of the nervous system.

The subject of the lecture is naturally divisible into three parts.

1st. A study of the elementary parts of the central nervous system—their anatomical attributes and physiological properties.

2d. A study of the organs and apparatuses in the central nervous system, and their functions.

3d. A summary of the chief modifications of the properties and functions which constitute the symptomatology of disease.

1. The part comprising the nervous centres may be classified as follows:

A. Bindweb (neuroglia).
B. Bloodvessels and lymphatic spaces.
C. Nerve fibres { myelinic. / amyelinic.
D. Nerve cells (ganglion cells).

A. The bindweb, gentlemen, is the framework in which lie the strictly nervous elements of the nervous system; it incloses and supports nerve fibres, nerve cells, and bloodvessels. Its histological composition is that of a fibro-connective tissue, according to the latest observations. In it we meet with bundles of connective-tissue fibres, with exceedingly delicate fibrillæ of fibrous tissue, and with more or less altered cells lying often at the point of meeting of the fibrillæ. The fibrous fibrillæ are more immediately in relation with the nerve-fibres and cells, while the connective tissue, constituting the septa and the cortical layer of the spinal cord, are united at the periphery with the pia mater, or innermost membrane of the three surrounding the brain and cord. The bindwebs of the brain and spinal cord are similar in kind, but the cerebral fibro-connective tissue is much the more delicate. The statements that there is a "granular matter" in the neuroglia, or that it is a sponge-like tissue, I believe from personal observations to be based upon inexact observations. At any rate, it suffices for our purpose to know the bindweb as a form of connective tissue, containing nuclei which may be the starting-point of proliferation changes tending to truly pathological or to reparative changes.

B. The bloodvessels of the nervous centres are very abundant, and are in many respects peculiar. The capillaries are by far more numerous in the gray matter of both encephalon and spinal cord than in the white substance. The larger vessels all reach the nervous organs through the pia mater. The rarity of anastomoses between the arteries in the cord and brain is a most striking feature, and is closely related with

* A lecture introductory to clinics upon Diseases of the Nervous System, delivered at the College of Physicians and Surgeons, New York, on Saturday, October 3d, 1874.

pathological processes. The non-capillary vessels are remarkable for the relatively extreme development of their muscular coat. The greatest peculiarity presented by these vessels, however, consists in their having an outer sheath, constituting a canal separated from the vessel by a small amount of fluid. All the vessels of the cerebro-spinal mass are thus inclosed. These so-called perivascular canals are made up of very delicate connective (structureless?) tissue, and contain a fluid very analogous to lymph. The perivascular canals are an extension into the parenchyma of a vast system of lymphatic spaces which surround the nervous centres, the so-called sub-arachnoid space in the meshes of the pia mater around the brain and spinal cord. This arrangement has been known for several years; and we now know, by the recent investigations of Ranvier and Axel Key, that the same sub-arachnoid or lymphatic space extends outward with every cerebral and spinal nerve to its termination. You should imagine the nervous system—brain, spinal cord, and their nerves—as floating in lymphoid fluid, contained in a delicate connective-tissue envelope. Even in the eyeball and internal ear these lymph spaces have been demonstrated. We are only beginning to appreciate the bearing of these important anatomical discoveries to pathological processes. It has been stated that nerve cells, in the cerebral convolutions especially, are surrounded by a similar lymphatic space—an extension of the one described—but this is, I am convinced, an error of interpretation, the space seen having been produced by the shrinkage of the cells under certain modes of preparation.

c. Nerve fibres. Several classifications of nerve fibres are in use, but the simple one of two classes—myelinic and amyelinic—will suffice for us physicians. By the term myelinic nerve fibre is meant a complete nerve fibre, one consisting of three parts—a central body or axis cylinder, a surrounding mass of fatty substance, the myeline, and a structureless enveloping sheath (the membrane of Schwann). In some parts of the nervous system the last element is absent. The amyelinic fibre is simply a naked axis cylinder. You see from these definitions, that the essential part of the three is the axis cylinder, the other two, which may be called insulating, are superadded. The amyelinic fibres are met with in the gray substance mostly, but are also abundant in the sympathetic nerves. We find myelinic nerve fibres, without the membrane of Schwann, and varying infinitely in size, in the white columns of the spinal cord, and in the white substance of the encephalic mass, constituting the bulk of these parts. There are also such fibres, though minute ones, in the gray substance of the cord and brain. The peripheral parts of the nervous system, all the cerebral and spinal nerves, and a part of the sympathetic, are made up of the second variety of myelinic fibres—those which have the three parts.

A peculiarity of nerve fibres is that they extend independently of each other, *i.e.*, not anastomosing, from their origin to their distribution, from nerve-cells in the central nervous mass to peripheral organs; and this isolation of nerves, together with their insulation, explains a physiological attribute to which I shall call your attention. I should add that forty years ago it was believed that nerve fibres extended from the brain to the outer parts of the body, and that the spinal cord was chiefly a bundle of nerves. Progress has strongly tended to take this supremacy away from the brain, to show us the importance of the spinal cord as a centre; and we now believe that nerve fibres once in the spinal cord run only a comparatively short distance before uniting with nerve-cells.

D. nerve cells are the noblest elements of the nervous system; those which possess the power of generating force in the modern acceptance of the phrase, *i.e.*, the property of evolving nerve force out of chemical activity. They are found in greatest number in the brain, spinal cord, and sympathetic nervous system—aggregations of them constituting gray matter or ganglia. Nerve cells, wherever found, consist of organized matter, call it protoplasm if you will, not inclosed in any cell membrane, sending out prolongations or processes of various shapes and lengths, containing a globular body called the nucleus, which itself incloses a smaller body termed the nucleus. These nerve cells vary in size, in shape, and in the number of their processes. The largest ganglion cells are met with in the anterior gray horns of the spinal cord in its lumbar and cervical enlargements. In the ox, cells taken from these localities are almost visible to the naked eye. In the floor of the fourth ventricle (medulla oblongata) and in certain parts of the base of the brain large cells are also found. The smallest cells recur in the gray matter of the cerebral convolutions, and in parts of the medulla oblongata. As regards shape, four subdivisions may be recognized: polyhedral, pyramidal, oval, and round. The first are met with in the same location as the largest cells; the pyramidal are nearly restricted to the cerebral convolutions; oval cells are found in the median and posterior parts of the gray matter of the cord, and in the medulla; round cells in the sympathetic and in the ganglia of the posterior roots of the spinal nerves. With respect to the disposition of their processes, cells are distinguished as multipolar, bipolar, and apolar. I do not believe in the existence of apolar nerve cells. Under the name of multipolar cells we include a majority of ganglion cells; those of the cerebral cortex exhibiting from three to six processes, the large cells of the medulla and spinal cord showing a great many—eight, twelve, or more. Bipolar cells are rarely seen in preparations from the human nervous centres. The separations of cell processes into two classes was an important progress. A multipolar cell sends out one stout, thick process, which extends a long distance, not subdividing, ultimately forming, with the addition of myeline, a nerve fibre. The same cell also throws off an indefinite number of processes of unequal size, which rapidly subdivide, growing smaller and smaller. The former is the "cylinder axis process;" the latter are the "protoplasma processes," and their destination is unknown. It has been claimed that the number of processes and the size of cells afford an indication of their special functions, but that is not believed to-day. I should add that the communications between cells which you will find figured in books do not exist; and that the communication of nerve fibres with nerve cells has been demonstrated, though a very few times.

These elementary structures, while alive and forming a part of the animal body, possess certain physiological properties, some common to all, others the special attributes of individual parts. The most common of these physiological properties is that of being osmotic, *i.e.*, of allowing fluids to pass through them. This property is possessed in a very high degree by capillary vessels, by arterioles, venules, and the perivascular sheaths—the escape of material from them to the tissues, and *vice versâ*, being very rapid and free. The bindweb, also, has the osmotic property in a high degree, and thus serves as an aid to nutrition as well as a mechanical support. Nerve fibres and nerve cells are undoubtedly osmotic, but to a much less degree. Wherever it exists, this important

process is under the same laws; it is only possible when liquids of different density are on either side of the membrane; its rapidity is increased by motion, pressure, heat, and chemical action, all of these being found in the living nervous centres.

Chemical changes of a very complicated sort are going on constantly in the cells and nerve fibres of the central nervous system, constituting the essence of nutrition. In a state of health the acquisition of new material by the tissues is so balanced with the separation of effete matter, that, in spite of great internal activity, the parts are maintained in an uniform (not mathematically equal) condition. We should never forget that this chemical action in myrids of parts cannot take place without producing other correlative effects, such as nerve force, heat, and electric currents.

Nerve fibres possess certain special physiological properties. In the first place, they conduct the impressions they receive, in both directions, from the central organs to the periphery and *vice versâ*. This conduction is not by any means instantaneous or even very rapid, as it takes place in isolated nerve fibres at the rate of less than sixty yards per second, whereas the speed of electricity is 464,000,000 yards; that of light, 300,000,000; that of sound, 332; that of a cannon-ball, 552. In the living body the rate of transmission is from forty to forty-five yards. This conduction is done, furthermore, in a perfectly isolated way by individual nerve fibres: there is no interference between fibres on their way to and from the central organs. Nerve fibres are excitable, that is, respond to stimuli—mechanical, chemical, and electrical—by motor manifestations or by sensations when the motor or sensory filaments are experimented upon. This excitability is quite independent of the nervous centres, and is inherent to the nerve, as is shown by the fact that a nerve continues to react to stimuli for three days after its separation from continuity with the nervous centre.

Nerve cells have properties whose existence we learn in part through reasoning by exclusion, after having ascertained the properties of nerve fibres, and in part by direct experimentation. In the first place, certain nerve cells have the power of furnishing force (motor impulse) to nerves and muscles; this is called motricity by some authors. Another property of nerve cells is sensitivity, that is, the property of transforming impressions received from without by and through the sensory nerves into a sensation. That nerve cells possess a power over the nutrition of parts non-nervous, we now incline to believe; but we hardly yet dare name and define this property. But nerve cells have, I believe, yet one physiological property, viz., that of retaining impressions made upon them; a property for which I now propose the term retentivity. I have for some time believed that nerve cells (and other cells to a degree) do in all parts what it is acknowledged they do in the cerebral convolutions—they possess memory, or the property of registering or retaining impressions. That this is probable is shown by the fatality of numerous actions occurring a second time and oftener. The occurrence of a sensation will give rise to a flow of ideas associated with the sensation, and this under normal conditions will be repeated whenever the sensation is renewed. An action of the class, called reflex or sensori-motor, is, after its first performance, fatally repeated whenever the same initial sensory irritation occurs. A bolus of mixed foods passing down the alimentary canal provokes in a necessary or fatal way the action of various muscular, vascular, and glandular organs. The well-known experiment of placing a drop of acid near a frog's anus, after decapitation, illustrates my view of the possession of memory by the nerve-cells of the spinal cord; for in this experiment the hinder legs of the animal are drawn up and moved in an apparently intelligent manner, in such a way as to remove the irritating acid. Three years ago, in spring lectures given here, I explained this phenomenon by saying, that the frog having during its life often performed this act for the same purpose, its occurrence after cerebral death takes place by necessity, because the same sensation is transmitted to the spinal cord. Additional proof of the correctness of this theory is to be obtained from a study of the mode of acquisition and retention of complex co-ordinate movements, such as walking, dancing, piano-playing, etc. Motricity, sensitivity, and retentivity are therefore the chief special physiological properties of nerve cells.

Let us now, gentlemen, resume our statical, or, if you please, anatomical study. The various nervous elements which I have sketched for you are combined in the living body in such a way as to constitute organs and apparatuses. The term organ I would apply to such parts as are the seat of performance of relatively limited and less important functions, while by apparatus I understand a combination of organs serving for the evolution of important and comprehensive functions. The spinal cord, medulla oblongata, pons Varolii, cerebellum, and cerebrum may be named as the central nervous organs, made up as follows: The cerebrum consists of a superficial or cortical layer of gray matter, *i.e.*, of tissue made up of nerve cells, and both kinds of nerve fibres (myelinic and amyelinic), arranged in a somewhat complicated way. This gray matter rests upon the white substance composed of myelinic fibres, which extend downward and inward to certain basal gray bodies or ganglia, the optic thalamus, and the corpus striatum; or the white substance may be described as radiating from these bodies toward the peripheral gray matter, which latter is arranged in folds called convolutions or gyri. The cerebellum has an analogous structure, with variations—the corpus dentatum as central gray body, and white substance radiating thence to the peripheral convolutions. The pons Varolii is made up of white substance on its outer and anterior parts, with masses of gray matter within. In the medulla oblongata we find an analogous structure, white matter at the periphery, and gray matter in the centre and posteriorly. The floor of the fourth ventricle contains a series of most important ganglia (masses of gray matter). The spinal cord has the same structure throughout its length—a structure best described upon a transverse section. Such a section is seen to consist of symmetrical halves, each containing a central gray mass and peripheral white matter. The gray matter is divided into anterior and posterior masses, the so-called horns, of which the anterior is the layer. The posterior horn reaches out to the margin of the organ, but everywhere else there is white substance outside of the gray horns. The shape of the gray horns and the relative proportion of white and gray substances vary in different parts of the cord, but that does not immediately concern us. From the spinal cord, symmetrical on either side, are the roots of nerves; the posterior roots being attached to the cord just inside of the posterior horn, the anterior roots issuing from the anterior mass of white matter. Upon the posterior root, just before it conjoins with the anterior root, we see a small swelling which is a mass of gray matter—a ganglion. The white peripheral matter is usually subdivided in each half of the spinal cord into two

parts—the antero-lateral columns, and the posterior columns—the dividing line between them being the posterior gray horn, where it strikes the periphery of the organ. A microscopic central canal runs the entire length of the spinal cord, continuous with the large openings, called the ventricles in the encephalic masses. Just at the junction of the spinal cord and medulla oblongata, in front, is seen a limited spot where bundles of white substance cross the median line, being myelinic fibres extending from the anterior column or pyramid of one side of the medulla to the antero-lateral column of the other side of the cord, constituting the so-called decussation of the pyramids.

The encephalic nerves all terminate in parts below the hemispheres and cerebellum. If I add that histologically and morphologically every part beneath the cerebrum, cerebellum, and opto-striate bodies belong to the spinal cord, it will be truthful, and of great help in our physiological and pathological studies. Ever since I began lecturing here, four years ago, I have taught this natural division of the nervous centres into the spinal axis, cerebellum, and cerebrum. Accepting this classification of the centres, we can also say that with the exception of the olfactory, all nerves are spinal, which philosophically is perfectly true.

I will now call your attention to certain great functions of the central nervous system—functions which involve the entering into activity of large tracts of nervous tissue extending over one or more of the organs just enumerated. I allude to the conduction of sensations, the transmission of motor impulses, the so-called reflex action, and co-ordination of movement.

In the first place, about the conduction of sensations. How are sensations formed in the spinal gray matter transmitted upward so as to be put within reach of the higher sensibility we call consciousness? To this question only a very partial answer is possible, mainly with reference to the direction of conduction. It is quite surely ascertained that a sensation originating in an irritation of the right lower extremity is perceived by the left cerebral hemisphere, and the left half of the pons Varolii. In other words, the sensory nerves, or better, the sensory paths, all cross the median line somewhere in the spinal axis. We owe chiefly to the experimental inquiries and pathological observations of Brown-Séquard the demonstration of two most important facts in this connection: (1) That these paths cross the median line (decussate) almost immediately after entering the cord, and then extend upward in the opposite half of the organ to the seat of consciousness; (2) and that it is the central gray matter, not the posterior columns, which contains these paths. This almost horizontal decussation has been shown to take place at the origin of every spinal nerve; in other words, sensory decussation is complete throughout the spinal axis. There seem to be good experimental and pathological reasons for believing that the perception of sensation (their appreciation by consciousness) takes place in the pons Varolii; though cerebral action must intervene in the most complete perception, that including recognition of cause of irritation. I cannot leave the subject of transmission of sensations without adding a few words about a great law, a proper understanding of which is of great help to us in diagnosis, I mean the law of reference of sensations. By reference of sensations we mean the fact that when a sensory nerve is irritated at any point, at its termination (normal way), its middle, or at its origin in the spinal axis, the resulting sensation is felt in the parts to which the nerve is distributed. To illustrate: If I touch the table with my two outer fingers, I correctly refer the sensation to the vicinity of the pulp of these fingers; if I strike the ulnar nerve behind the elbow, the greatest sensation is felt in the tips of the little and ring fingers, which this nerve supplies, and if I could irritate the spinal origin of the ulnar nerve, or parts in physiological relation with it higher up, the sensation would still be felt in the district supplied by the nerve. You all are aware that persons who have lost limbs by amputation feel the absent member a good while; and they do so by virtue of this law. This law of reference of sensations holds good throughout the sensory tract (æsthesodic tract), from the special senses down.

In the second place, as regards the transmission of motor impulses from the nervous centres outward. Experiments and pathological observations have taught us that in the apparatus for motor manifestations (kinesodic tract) there is also a crossing over of paths. The motor fibres, or, better, paths which transmit impulses to the right leg traverse the median line, though in a very different way from the sensory paths of the same limb. The right half of the spinal cord contains, throughout its length, the motor paths for the right limbs and right side of trunk; no decussation takes place until the lower edge of the medulla oblongata is reached, when all the motor paths cross the median line and enter the left side of the medulla to extend upward to the cerebrum. In the medulla and the pons Varolii the motor paths cross the median line rather higher up than the origin of the motor nerves. The importance of using the word paths instead of nerves, in the present state of our knowledge, is shown in this connection, since physiology and pathology teach that there is a crossing over, while anatomy seems to demonstrate that all motor nerves (anterior spinal roots) have their nucleus of origin in the corresponding half of the spinal cord; the right sciatic nerve springing from the right anterior horn of the cord, the right hypoglossal and facial nerves from nuclei in the floor of the fourth ventricle on the right side of the median line.

In the third place, the all-pervading function of reflex action—sensori-motor, excito-motor phenomena. The following definition of a reflex action is perhaps sufficient in a theoretical sense: it consists in the transformation, by nerve cells, of a sensitive impression (with or without consciousness) into motion, chemical action, or ideas. The parts essential to the performance of a reflex action consists of a centripetal (sensory) nerve to transmit the excitation, a ganglion cell to transform it into nervous force, and a centrifugal nerve to carry the nervous impulse to the muscle, gland, or cerebral convolutions. The results of the activity of such an apparatus are motion (common muscular, or vascular), secretion, ideation. From this definition you can readily imagine that reflex actions occur in nearly every part of the body, in small segments of it as well as in large portions. A heart cut out of the animal's body will continue to beat some time in response to irritations. Contractions may be obtained by irritating a small portion of intestine removed from the body, and a small segment of the spinal cord will suffice to give reflex movements in the muscles supplied by that piece of cord. Reflex actions take place in all parts of the nervous system (spinal axis, cerebrum, sympathetic system), and at all times: and it is through this kind of action that the most important bodily functions (including in part, certainly, cerebration) are produced. There is a tendency to make all active nervous phenomena of reflex nature, denying the existence of spontaneity in the animal frame, and I must admit that a good deal can be said

in support of this extreme view. It would be quite out of place for me to enter into any details about individual reflex actions. I only ask you to remember that many mental manifestations are reflex in character; that respiration, circulation, nutrition, many acts of our life of relation (walking, etc.), are under the control of the law of reflex action; and that many diseases are produced by just the same mechanism.

Lastly, concerning co-ordination of movements. It has been thought, and that within twenty-five years, that there existed a "faculty" of co-ordination (what "faculties" have not been invented by fertile brains!) by the exercise of which our movements are regulated and made perfect. Such a view I need hardly tell you is quite opposed to present physiological and psychological notions. Simple experiments performed long ago show the absurdity of this creation of the theorizer. If the cerebellum or cerebrum be removed from an animal, it is noticed that in the animal deprived of cerebrum there is no impairment of co-ordination at any time: in the case of injury to the cerebellum inco-ordination occurs, and lasts for quite a while; but as shown by Dalton, Lussana, and Weir Mitchell, this disorder ultimately ceases. I have already referred to the experiment of putting nitric acid upon a frog's anus after decapitation, with the effect of causing perfectly co-ordinate movements resulting in the removal of the acid: which movements are so perfect as to have led one German physician at least to admit a consciousness and volition of the spinal cord. These experiments show that co-ordination is a function of many parts of the nervous centres. Another way of studying this function is by watching the physical education of an infant. At first his motions are utterly purposeless and inco-ordinate, but by degrees he acquires the power of moving groups of muscles in a definite way, and at length comes to prehend, to stand, to walk, to speak; and when older he may learn to eat, to play on the piano, to do astonishing feats of hand-skill. By analyzing this progress we reach the conclusion that parts of the nervous centres are educated by repetitions of sensory impressions and of volitional motor impulses, leaving their impress upon groups of cells (so-called centres) which have the property I propose to call retentivity: the cells acquire the "habit" of acting in an automatic, necessary way. It is, furthermore, important to notice in this connection the fact that it is impossible for us to move one muscle alone by a volitional impulse; in other words, the simplest act is co-ordinate. For example, the external rectus muscle of the right eye cannot be made to contract without consentaneous contraction of the internal rectus of the opposite eye; in willed flexion of the hand the extensor muscles contract as well as the flexors. The best theory of co-ordination, to my mind, is that which, denying all direct (continuous) connection between the cerebrum and individual muscles, admits the existence of educable or educated groups of motor cells in all parts of the spinal axis, which groups act as wholes upon the reception of a volitional impulse. We will to grasp a pen, and, after having learned, we do it without giving any attention to the details of the movements. The necessity of watching movements which should be performed in an automatic way is a serious symptom of disease.

To resume, there are four generalized functions in the nervous system.

1st. Sensation and perception are executed by means of paths which decussate almost horizontally in the spinal axis; the conduction being by the gray matter, not by the white columns of the cord; coarse sensibility with doubtful consciousness has its seat in the pons Varolii; perfect perception and appreciations is possible only with the help of the cerebral mass.

2d. Motion is executed through motor impulses, which, starting from the opto-striate bodies (from cortex of cerebrum also?) traverse paths which decussate almost opposite the motor nerves as far down as the lower margin of the medulla oblongata, where the paths for the trunk and limbs decussate in a bundle, to remain, below this point, in that half of the spinal cord whence arise the nerves going to the muscles.

3d. Reflex action is the result of a transformation of an irritation from the periphery into nervous force by a nerve cell, transmitted centrifugally by a second nerve. That all nervous phenomena are of reflex mechanism is not to be too positively denied.

4th. Co-ordination is no faculty, but a function of every portion of the motor tract of the spinal axis from the origin of the third cerebral nerve down.

There is not time for, nor had I had the intention of, entering into an analysis of the restricted functions of the organs composing the nervous centres. Even Hitzig's and Ferrier's most interesting researches into the possible motor functions of the cerebral convolutions I must pass by, intending to speak of them in the course of remarks upon the cases which we shall study together this winter.

There are a few pathological laws logically allied to the physiological propositions enumerated above, which I want to submit to you.

1st. Any disease of any part of the nervous centres may produce two kinds of symptoms, which we should always attempt to distinguish: these being symptoms of irritation, consisting, according to the location of the lesion, in exaltation of ideas, delirium, in numbness, pain, and in spasmodic movements; and symptoms of destruction of parts, loss of mental power, anæsthesia, paralysis. Brown-Séquard was, I believe, the first to insist upon the exceeding importance of distinguishing these two classes of effects.

2d. It should be borne in mind that irritating lesions may cause the second class of symptoms by producing an inhibitory (arresting) effect upon centres near or distant.

3d. Ischæmia of the nervous centres produces extreme irritation symptoms, delirium, spasms, pain, and numbness, followed by loss of function of parts.

4th. The effects of hyperæmia are not satisfactorily known.

5th. A want of equilibrium in the circulation of both hemispheres is a common cause of vertigo.

6th. Almost any lesion of the nervous centres may disturb the nutrition of distant (non-nervous) tissues.

7th. A generalized lesion of the convolutions of the brain produces, first, exaltation of mind and emotions, followed by abolition of the faculties, and a false general paralysis.

8th. A lesion of one cerebral hemisphere gives rise to symptoms (paralysis, numbness) in the opposite side of the body and face. The localization of the lesion in the left hemisphere about the fissure of Sylvius, is exceedingly likely to abolish language spoken and written; while lesions of the right hemisphere produce more severe palsy, set the emotions free, and endanger life more.

9th. A lesion of the centre of the pons Varolii will produce general paralysis, with probably anæsthesia and changes in the bottom of the eyes.

10th. A lesion in one-half of the pons Varolii will produce palsy with (probably) anæsthesia in the opposite side of the body.

11th. Lesions of the cerebellum when in one lobe

produce an incomplete hemiplegia on the opposite side, with marked eye and stomach symptoms.

12th. A suddenly produced lesion of the centre of the medulla oblongata will probably kill the patient at once by arresting the respiration.

13th. A lesion localized in one-half of the medulla oblongata will give rise to hemiplegia and anæsthesia on the opposite side.

14th. A lesion at the base of the brain, not on the median line, will produce a crossed palsy (as first indicated by Romberg); palsy of body on side opposite lesion, and palsy of one or more cranial nerves on the same side as the disease.

15th. Pressure anywhere within the skull may affect the nutrition of the optic nerves.

16th. In lesions of the cerebral hemispheres accompanied by coma (apoplexy), the eyes are together turned and fixed toward the side of the lesion, and away from the palsied side.

17th. A lesion occupying the whole thickness of the spinal cord, or its gray matter, will give rise to palsy of all parts below the lesion, *i.e.*, below the distribution of nerves issuing from just above the lesion; and such a paraplegia is necessarily attended by anæsthesia, and increased reflex movements in palsied parts.

18th. A lesion in one-half of the spinal cord (hemisection, Brown-Séquard), at any point will produce paralysis with hyperæsthesia on the same side as the lesion, and anæsthesia on the opposite side.

19th. A lesion involving the posterior columns of the spinal cord produces neuralgia and ataxia of movements.

20th. A lesion affecting the lateral columns of the spinal cord will cause a paralysis accompanied by contracture.

21st. A lesion of the cells of the anterior horns of the cord alone will produce a palsy (no anæsthesia), accompanied by extreme wasting of muscles, and loss of electro-muscular reaction. Any part of the spinal axis may be the seat of this disease.

22d. A lesion (destructive) of nerve trunks gives rise to a paralysis with anæsthesia, and rapid loss of electro-muscular reaction.

23d. A lesion in the cerebrum and the opto-striate bodies may produce secondary lesions in the spinal cord and nerves.

24th. A lesion of the spinal cord may cause secondary lesions upward and downward in the cord, and in nerves.

25th. Lesions of nerve trunks may produce secondary lesions of the spinal cord.

Original Communications.

ON THE GENERAL TREATMENT OF PLEURISY, AND THE USE OF "CROTON-OIL PAINT" AS A SUBSTITUTE FOR FLY-BLISTERS.

By JOHN W. CORSON, M.D.,

ORANGE, N. J.

(Read before the New York Med. Library and Journal Association, October 23, 1874.)

CAREFUL statistics from great charities have helped to fix the real value of many remedies. When life is at stake we dare not lightly risk new things. In presenting any fancied improvements before so many accomplished physicians, it is but just, frankly to give the facts and figures on which they are based. Let us gladly appeal to numbers. From the report of Dr. Aigner of his European tour, it appears that, doubtless from our vast emigration, the dispensaries of New York are the largest in the world.* The writer proposes to discuss the general treatment of pleurisy, and the use of croton-oil and the tincture of iodine as substitutes for fly-blisters, in this lowly field. His experience was mainly during several years of service as physician to the class of "Diseases of the Chest and Throat," in the New York and Eastern Dispensaries. These investigations were commenced more than twenty years since. They were principally in the first of the above institutions, which was the most venerable and extensive.

Many present will remember a quaint old brick building that then stood on the site of the present elegant edifice in Centre street, near the Five Points. A stone on the south end celebrated the date of its erection, in the last century, by the inscription, "*New York Dispensary*, 1790." From many causes this noble charity furnished the greatest "annual crop" of pleurisy that we have ever seen. It was built, as if in honor of our Dutch ancestors, over an ancient skating-pond. Even as early as our day it was surrounded with great, filthy tenement-houses. These were filled to overflowing with weary, destitute emigrants of all nations, who were often fed on cheap refuse provisions, and lodged on cold floors with a scanty covering. The sanitary condition of that low region was awful. In some respects it was doubtless worse than that of St. Giles, London, or Cowgate, Edinburgh. At midnight in winter, it seemed like the valley of death. It was near Cow Bay, and the haunts of sin and misery. And it had underground dance-houses, with small, red windows, lit up as with Satanic flames. Here all human colors mingled in revelry, and drunken men staggered forth as if from a Turkish bath, reeking with perspiration, to sleep and sicken on frozen sidewalks.

The multitude of sick relieved by this long-established institution for our young country, was almost incredible. Its reputation had grown among all classes from its foundation, owing to the labors of many of the best physicians of your city.† From a volume of printed Annual Reports, kindly furnished by the treasurer, which we hold in our hands, we learn that during the seven years and a half of our service there, commencing with the spring of 1852, that including vaccinations, dentistry, and all its departments, it actually averaged the enormous number of over forty thousand patients yearly. For the reasons given, its percentage of chest diseases was very large. It seems from these records that within six years of strict classification, previous to the close of 1859, during which, with the exception of a few weeks, the writer divided equally with another physician the class of "Diseases of the Chest and Throat," there were entered twelve hundred and forty-eight cases as "pleuritis." This was an average of two hundred and eight annually. The male side, which we happened to have,

* See Annual Report of the New York Dispensary for 1863. St. Bartholomew's and other hospitals in London have very large "Out-Door Departments;" but the regular dispensaries of European cities are much smaller than ours.

† Among many other well-known names, we notice on the "consulting" list, those of Drs. Hosack, Post, Stevens, Willard Parker, Gilman, Bulkley, Watson, Linsly, and Markoe; and as Attending Physicians or Surgeons, Drs. A. C. Post, Gurdon Buck, J. A. Swett, G. F. Shrady, I. E. Taylor, Purdy, James Crane, Van Kleek, McCready, Clements, Briddon, J. O. Stone, Purple, Halstead, Elisha Harris, Stephen Smith, Bishop, Eager, Gomez, A. B. Mott, Thebaud, Pulling, Cameron, O'Rourke, Aigner, W. C. Corson, Kennedy, Harrison, Kelly, Murray, and many others.

would naturally rather excel the female department from greater exposure. Deducting one-sixth for the district service, this would give for our personal share, as the basis of these observations, over five hundred cases of pleurisy. To be safely within bounds, this estimate does not include the extra patients sent to our Saturday "Chest Clinique" for students, nor those of three years on the district, nor the results of three years of attendance during this period in the same class in that worthy charity the Eastern Dispensary.

From differences in the severity of the winters, or other causes, the numbers with chest affections varied. These fluctuations may be illustrated by the following table, with the result in each year, taken from the Annual Report of the year following:

NEW YORK DISPENSARY—VARIATIONS IN SEASONS.

Four prevailing Diseases of the Chest, for Six Years previous to January 1st, 1860.

Year.	Pleurisy.	Pneumonia.	Phthisis.	Bronchitis.
1859 (Rep. 1860).	306	119	1,906	4,067
1858	250	192	1,356	4,974
1857	144	166	1,235	5,495
1856	131	132	895	4,057
1855	235	226	630	3,126
1854	182	274	658	1,810
Totals	1,248	1,109	6,719	23,529

It will be seen that "bronchitis" largely heads the list, while the sad array of consumptives comes next. As proof of care in diagnosis, there were recorded in this term a "total" of 1,175 patients with "pleurodynia," or "muscular pains" of the chest. Those interested in sanitary studies may make a more accurate comparison of these changes, with the aid of the following table, giving the entire attendance for this period:

PATIENTS OF ALL CLASSES, INCLUDING VACCINATIONS, ETC.

1859 (Rep. 1860.)	44,627	1856	40,235
1858	47,082	1855	39,554
1857	41,235	1854	46,052
Total			258,725

Among these poor we soon learned to dread the exhaustion of large fly-blisters. Even with the hardy subjects which they seemed to benefit, they were soon cut down to the standard of four inches square, or less. One or two only were used at intervals of a few days, and they were soothed with an anodyne poultice before dressing.

In the latter half of the management of these Dispensary cases, there was found a far better substitute for blisters. It was the alternate application of iodine and croton-oil. We commonly changed to these last when the tape-line showed slight enlargement or "bulging;" when inspection proved that the intercostal spaces were beginning to flatten, and when the dulness on percussion was more completely "deadened." The ribs over the effusion were then painted with several coats of the tincture of iodine in large brown patches, five or six inches square, every second or third day. These stains were rubbed over with two or three drops of croton-oil—perhaps once a week—just sufficient to maintain moderate pustulation. And the soiled fingers were at once washed with soap and water. When the space thus gently irritated was healed, the process was repeated or the location was changed. And thus we kept painting and rubbing till the effusion was gone.

The excellent results which we shall presently mention were hardly due to these appliances alone; for as every sensible practitioner knows, counter-irritation in any form is only a valuable auxiliary to internal treatment. And this last was equally mild. Even at that early day, among these poor emigrants, we never either bled or purged in pleurisy. As a rule, latterly, we avoided antimony, mercury, veratrum viride, and aconite. We did not deny their valuable services as arterial sedatives, and as excellent substitutes for blood-letting in inflammation, with stronger patients or in private practice, in this brain-weary age. But with these weaker constitutions we feared that they would help to thin the blood or palsy the impulse of the feeble heart. We were not quite original. It is but a just tribute to say, that this caution was due in part to the previous teachings of that admirable chest physician, Skoda, during a few months in the hospital at Vienna.

In the acute stage, as is well known, we were liable to be consulted at two different points in its progress. There might be fever; a rapid or full pulse; thirst; a furred tongue; with difficulty of breathing; a sharp pain in the side, and a dry, teazing, cough, accompanied by the physical signs of stiffness in the chest movement and the "friction sounds" of the "dry period." Or a little later these febrile and rational symptoms might be associated with marked dulness on percussion, and the absence of respiration from the effusion of the fluid. And one was relieved of the fear of pneumonia by the freedom from tenacious or bloody sputa. In either case, our first effort was to make the patient thoroughly *comfortable*. It was before the blessed day of hypodermic injections. We generally resorted to a safe anodyne, added to a diaphoretic or diuretic, and sometimes to both. It is scarcely necessary to add that there is little or no risk with a mild narcotic in these painful chest affections, when the face is not livid, and there is a warm glow upon the surface of the body. In our later experience the following soothing combinations, among others, were often used:

℞. Pulv. Doveri ..... gr. xx.
Pulv. potassæ nitrat ..... gr. xx.
Pulv. opii ..... gr. ij.
Pulv. sacchar. alb ..... ʒ i.
Ol. anisi ..... gtt. ij.
Spirit cinnamon (tinct. ol.) ..... gtt. iij.
M. et div. in pulv. No. vi.

Take one powder in moistened sugar every four waking hours till quiet.

In mercy a saccharine aromatic was added to cover the mawkish taste of these powders. Some of our friends present will recognize this addition as a concentrated imitation of that very convenient preparation, the "oil sugar" of the German pharmacopœia, composed of one drop of essential oil to thirty grains of sugar.*

In milder cases, or later in the disease perhaps, we treat thus:

℞. Liquor ammoniæ acetat ..... ℥ iij.
Spirit. ether. nitr ..... ʒ iij.
Tinct. hyoscyami ..... ʒ ij.– ʒ iv.
Spirit. gaultheriæ (tinct. ol.) ..... gtt. xij.
M.

Take a dessert-spoonful in sweetened water every four waking hours. When convenient, this was given with some grateful fruit juice, or with lumps of ice dissolved upon the tongue. If the fever was very high, half a drachm or more of the nitrate of potass, in solu-

* See Article "Oelzucker," edition 1870. [With a refinement worthy of German civilization, it makes the mouth water with such "delicacies for the sick," as the syrups of cinnamon and raspberry.

tion, was substituted for the acetate of ammonia. When the hyoscyamus failed to quiet the pain, a little morphia was sometimes administered.

Within the last few years we have changed to milder external applications at the commencement. We have resorted to a plan equally serviceable and safe in pains of the chest or abdomen. Over the aching side there has been at first laid a blood-warm mustard plaster, half meal or flour, folded between cloths, and applied for twenty or thirty minutes, till the surface has been well reddened but not blistered. The mustard has been followed by a piece of flannel wet with laudanum or spirits of camphor. This again has been pressed home to the ribs by a comfortably hot bag of three or four quarts of meal, oats, or better still, *wheat bran*. If musty, from being long kept for the purpose, it may be sprinkled with cologne. It is generally heated in a deep dish, in a stove, oven, or range, and poured into a soft pillow-case, to be lightly applied and renewed as it gets cooled. We think "dry heat" is much more safe than moist. The "bran bag" may be kept warm much longer if covered with sheets of cotton wool, enveloped with brown paper, or more perfectly still, with "*oiled silk*." This sort of domestic Turkish bath is commonly used, for several hours at the onset of the disease, first to quiet pain, and next to excite a gentle perspiration, and thus relieve congestion of the ung.*

All this gentleness was to save strength. We waited till the early acute symptoms had passed before venturing to apply a blister. The diet was rather liberal. Milk, eggs, toast, bread and butter, plain vegetables, fruit, and the lighter forms of animal food were gradually allowed; for it was evident that prostration would soon follow.

In the chronic stage it was found convenient to compare the good effects of squills, digitalis, the acetate of potass, and other diuretics, by the following test, available for the first fortnight or more of the effusion. It was to listen directly over the upper border of the fluid—while the patient distinctly counted—for that piercing, trembling echo of voice, the "Ægophony" of Laennec. Or in its absence, there was usually marked "bronchophony" without the vibration. One or the other was commonly audible at this period, if carefully sought at a point nearly opposite the middle of the scapula, or upwards or downwards about two inches from the spinal column behind. A black mark, an inch long, was at once made over this penetrating line of voice, with a moistened stick of *nitrate of silver*. And this dark stain remained perhaps for ten days or more, as a fixed landmark for daily careful observations, to measure the rise or fall of the fluid within. For these changes corresponded with the shiftings of the intensified sound of voice. This mark was also a useful guide in estimating any variations in the respiratory murmur or dulness on percussion. And it told the story, when fortunate, of gradual cure. We do not know the author of this excellent device. At least two accomplished friends have used it for years.

These physical signs were all made more clear by another simple expedient. The patient was directed to cross both arms and grasp, not these but the *highest points on the shoulders as far back as he could reach*. He then pulled them steadily and firmly forward, so as to separate the shoulder blades, and hold them *fixed as widely apart as possible behind*. This process might be aptly termed *uncovering*; for it partly laid bare the ribs under both scapulæ and stretched and thinned the thick muscles in their rear. The writer had occasion to commend this improvement on the old position in a paper read before the Academy of Medicine, and published in the *New York Journal of Medicine* for March, 1859, "On the Management of the Shoulders in Chest Examinations." In consumptive patients it was also a great assistance in searching for obscure groups of tubercles at the apex of the lungs behind. We add a sketch.

Nitrate of-Silver Mark; Ægophony or Bronchophony; "Uncovering the Chest behind."

By many experiments with the "nitrate-of-silver test," aided by this expedient of "uncovering," we came at length, as a rule, to prefer the iodide of potassium in steady moderate doses, as the most uniformly successful tonic diuretic of the list. Others might produce a greater temporary increase in the quantity of urine; but this proved, as we fancied, the best absorbent to liberate the compressed lung. To use an agricultural figure, it excelled the others in its power of *under-draining*. It had also the power of preserving, and sometimes even increasing, the appetite for food. While we were mildly blistering or painting or rubbing for weeks together outside, we gave internally, at the same time, about five grains or even less of the iodide of potassium three times a day. This salt, as well as some of the preparations of iron, will produce a slight amount of *worry* in most sensitive subjects, which we have found relieved by a merely nervine addition of hyoscyamus or conium. The following prescription, variously modified, was a favorite with us as a mild diuretic in chronic pleurisy:

℞. Potass. iodid..... ʒ i.–ʒ iv.
Tinct. hyoscyam..... ʒ ij.
Tinct. cort. aurant..... ʒ i.
Spirit. gaultheriæ vel
Cinnamoni (tinct. ol.)..... gtt. xij.
Aquæ ad q. s. ft..... ʒ iv.
M.

Take a dessert-spoonful three times a day in a wine-glassful of sweetened water between meals. This mixture was sometimes made more diuretic by adding three or four scruples of the best extract of taraxacum, or more laxative and tonic by combining with it a

* The heated "bran bag," applied twice or three times a week at bedtime to the loins, by increasing cutaneous action has served us materially in the treatment of certain affections of the kidneys.

fluid drachm of the tincture of nux vomica. In tedious recovery the appetite was occasionally encouraged by qualifying the above combination with two or three drachms of the tincture of columbo, or an ounce of the tincture of calisaya bark.

We watched the more delicate of those pallid, emaciated patients with pleuritic effusion with deep interest. Until complete restoration to health there was always a lingering fear of future consumption. In some respects we happened to anticipate the recent views of Niemeyer and others as to the *occasional* agency of inflammation—especially in weak or scrofulous subjects—as the starting-point of tubercles. And these apprehensions stimulated all possible preventives. At the close of the treatment we recommended warm flannels, plenty of milk and meat, and other varied diet; ventilation in sleeping, and careful yet free exercise in sunlight and air. Sometimes the lost flesh was restored with cod-liver oil. And the ears were closely inspected to see if they needed *iron*. These were as interesting as the webs of frogs to young microscopists. Like the pulse, they were examined while free from excitement. And we have never seen a surer sign of the want of iron in the blood of a calm patient than a *pale, waxy ear*.

To favor those grand restoratives sleeping and eating, special pains were taken with the prescriptions. Medicines were always given by preference during "waking hours." Sugar was not so essential as water. Salts, acids, alkalies, and chemicals generally were thought to disturb the stomach less when pretty largely diluted. The interval "between meals" was commonly selected as the best time for the starch and other elements of partly digested food to combine with the iodide of potassium and some other substances.

An early accident directed our attention to another aid in building up these pale, wasted subjects, slowly recovering from pleurisy. Many years since, while on duty as physician to the Brooklyn City Hospital, the writer began a series of observations for a projected paper "On the Relative Agreement of Medicines with the Stomach." Fits of flatulence, tender spots, and furred tongues were counted till he was weary. The task of thus comparing all the bitter things of the materia medica proved too great. It was never finished. But the effort led to new views of the importance of their pleasant administration. On careful examination it appeared that digestion itself was often temporarily interrupted by the nausea from unpalatable drugs. In actual danger we never dared to fiddle with any kind of inert practice. With the prevailing exhaustion of this overworked age we were always generous in supporting agents. But in this it became a rule to conciliate the sense of taste—that jealous guardian to the stomach—with savory disguises. In fact it was simply bribing the porter. When their doses were made agreeable the poor seemed to eat the meagre fare of the sick-room with a keener relish. And if they thus recovered more rapidly, there was an actual saving in expense to a benevolent institution in adding a little sugar, a few drops of spicy tincture, or inexpensive aromatic essence. They would thus need less medication. We remember that dyspeptic consumptives used to profess to be attracted from other dispensaries by our "more pleasant" cod-liver oil spiced with a drachm to the pint—or less—of the very cheap oil of sassafras. As a general rule we observed that, as in the cookery of health, the stomach in sickness was best pleased with the more delicate *compound* flavors. In illustration we may mention that our most satisfactory recent improvement of cod-liver oil, in private practice, has been to add to the ordinary full bottle of oil a teaspoonful of a mixture of one part of the oil of pimento or "allspice," one part of the essence of cinnamon, and two parts of the tincture of orange-peel.* This kindly practice perfectly charmed children. And then it was only humane. Where the hundreds of millions of earth instinctively craved "seasoning" in their food, it was hard to deny them "condiments" in their medicines. So we have continued ever since this early experience to flavor from principle, in the firm belief that the sick are thus better nourished.

The success of this gentle plan in this serious malady among these poor emigrants was a constant surprise to us for years. We can hardly account for it still. In the main features of this mildness our worthy colleagues agreed. As the figures show, more than half the credit was due to their skill. We may give some facts. Statistics in a crowded dispensary can never be so perfect as in a well-organized hospital. Their weak point is the termination. Making in honor due allowance for the number of grave cases sent to the hospital from the dispensary and the "results" lost, as well as for the transient patients who would stray to the country, its death-rate from pleurisy was still very favorable. Probably the item of mortality was better kept than many others. For where cases became so serious as to be fatal, they were always attended at their homes by the district physicians. These were salaried officers, appointed usually after faithful services, who reported the losses from each disease monthly. In six years, and over twelve hundred cases, there were only recorded six deaths from pleurisy, or less than a half per cent. With the drawbacks we have mentioned, it may be more safe to estimate the loss in round numbers at one per cent. Again, we were on the lookout all this time, publicly and privately, for suitable subjects for Dr. Bowditch's comparatively safe operation for empyema, with a small trocar and pump, near the inferior angle of the scapula behind. And we only ventured to puncture eight times. With the recent improvement of the admirable aspirator of Dieulafoy, we should have probably operated much more frequently. In mild weather and moderate attacks the average time for the absorption of the fluid was about six weeks. This term was doubtless apparently extended by our caution in retaining patients under treatment longer than usual during convalescense. Unless the pulse ran for days over a hundred and twenty, we were pretty certain that the effusion was not purulent. Very curiously, our percentage of recoveries for some years was decidedly better in the dispensary than in private practice. Could it be that these wanderers from the fields and cottages of Europe had an elastic hardihood of constitution denied, with all their comforts, to our own brain-working citizens?

Returning to our process of economizing blisters by alternately painting and rubbing with the tincture of iodine and croton-oil, it may be remarked that it had three defects. It was filthy, tedious, and uncertain. The sick citizens of the Sixth Ward were very modest with cologne and croton water. In their misfortunes they were sometimes dirty. We speak mildly. And this solemn anointing—this benevolent staining of the white fingers of a young physician over ribs already browned and scarred—kept the crowd too long in waiting. Pure croton-oil rubbed outside had its freaks. It behaved well in a dozen patients perhaps, and then, without any warning, it ran wildly over a whole side like an eruption of small-pox; or in sleep it mounted

* Pimento as a delicate carminative has been introduced into three of the formulæ in the British Pharmacopœia.

to the face, with a capital imitation of erysipelas. Nothing but firm faith in its virtue made us endure these drawbacks. We longed for something better. It came. About four years since, in private practice, we discovered that sulphuric ether not only dissolved croton-oil in the tincture of iodine, but also greatly improved it as a counter-irritant. This combination could be cleanly and rapidly applied with a camel's-hair pencil, even by a nurse. It dried quickly, saved the fingers, and was very certain. Within twenty-four hours it commonly produced, on a red, even surface, a thickly dotted pustular eruption, smaller in size, less painful, and much better defined than that from croton-oil alone. The medical virtues of the iodine were retained, and even its dark stain on the skin helped accurately to measure the application. Thus improved we have found it, after a pretty extensive trial in different diseases, more generally serviceable than any other counter-irritant that we have ever used.

The curative action is the same; but in actual experience it is far more convenient than the alternate painting and rubbing of twenty years ago. In appearance it perfectly resembles both the tincture of iodine and Lugol's solution. It should be very carefully labelled. With "paint" staring him in the face, on the bottle, a worthy neighbor was so fascinated with its beautiful violet color, not long since, that he mistook it for the tincture of rhubarb, and took a teaspoonful of it to cure his diarrhœa. He was moved, down to his very boots. When you remember that a single drop of croton-oil will commonly produce five or six painful evacuations from the bowels, you can estimate the force of ten drops fired with forty of the tincture of iodine. He doubtless felt like a man with the nightmare, who dreams that he has swallowed the screw of a steamship in rapid motion. In fact, he got up a fearful imitation of Asiatic cholera, from which he fortunately recovered, much wiser in the study of purgatives. Excuse this playful illustration of a very serious matter—a mistake in taking medicines. To prevent such accidents, we advise you always, in writing this prescription, either to leave verbal directions with the druggist, or add a postscript, "Please write 'Paint' distinctly at the top." An intelligent lady patient one day called it "croton paint." "Liniment" will surely lead to blunders. "*Paint*" is just the word. With a slight addition for safety, let us commend this suggestion in a name to the grave committee of the next Pharmacopœia, and propose that it be first elegantly rendered "Pigmentum Croton Tiglii," and then be plainly translated "Croton-Oil Paint."* The quantity of sulphuric ether added should be double that of the oil, to make a perfect solution. If the ether is not pure, there will remain a little oil undissolved at the bottom. It is better always to shake the mixture before applying. From many experiments we have preferred two forms varying in strength. We give the formula:

MILDER CROTON-OIL PAINT.

℞. Olei croton tiglii..... ʒ i.
Ether. sulphur. fort..... ʒ ij.
Tinct. iodin..... ʒ v.
M.

Apply two or three coats at a time, with a camel's-hair brush, over a small surface once a week. This is most useful for children, females, or sensitive males.

STRONGER CROTON-OIL PAINT.

℞. Olei croton tiglii..... ʒ ij.
Ether. sulphur. fort..... ʒ iv.
Tinct. iodini..... ʒ ij.
Potass. iodid..... ℈ i.
Iodini..... gr. x.
M.

Paint, as above, over the side, back, or loins. It is richer in iodine and better adapted to less susceptible subjects.

With increased confidence from experience, these combinations have superseded blisters entirely in the majority of cases of pleurisy that we have treated within the past three years. We now apply them within forty-eight hours after the effusion. With two patients, not long since, one a lad of twelve years, just returned in the spring with an invalid from Florida, and the other a young lady of sixteen, after the exhibition of the iodide of potassium and repeated "paintings" alone, without the aid of blisters, the fluid was absorbed within a month.

As we have just intimated, our observations have extended beyond pleurisy. We have a collection of cases of affections of the eye, ear, bladder, and spine, as well as examples of whooping-cough, pleurodynia, muscular rheumatism, and sciatica, and other diseases, which we have gradually gathered from domestic practice and the "Dispensary Department" of the Orange Memorial Hospital. These show a wide range of usefulness of the "paint" as a counter-irritant. But we cannot trespass on your kindness with them now; we hope in future to present them through some proper channel.* It was most generally serviceable, perhaps, as a help to gentle expectorants in ordinary mild bronchitis, or, as it is familiarly termed, a "neglected cold" of a week's duration. And with the aid of tonics, nourishing diet, and *double flannels*, it often helped to alleviate the "winter cough" of the aged. Our favorite location for "painting" in these bronchial difficulties was each side of the spine, in the hollows between the shoulders. It caused here the least annoyance in both sexes, was protected in sleep and with nursing women, and seemed to afford most relief from being nearest the roots of the nerves concerned in coughing.

We close with a few precautions. On account of the danger of exciting either eczema or ulcers of the leg, we avoid applying croton-oil in any form below the hips. We here substitute the pure tincture of iodine. In affections of the eye and ear, a mere line of pustules can be concealed by the hair of the temple, or behind the mastoid process. Elsewhere, with both forms of the paint, we commonly cover a space of from one to five inches square—less in children and females, or along the spine—and more in males, or over the loins or the sides of the chest. From two to four coats at a time are applied with a camel's-hair brush, on the average about once a week. If this fails to pustulate within forty-eight hours, the surface is rubbed thoroughly with the finger till well reddened, and the paint is reapplied. When it spreads uncomfortably, or is more painful than usual, these symptoms may be promptly relieved by brushing over the eruption with equal parts of glycerine and laudanum, and then covering it with a soft piece of linen moistened with olive-oil.

* Since writing the above, we perceive that in the excellent Pharmacopœia of the Hospital for Diseases of the Throat, London, edited by Dr. Morell MacKenzie, there is a class of "Pigmenta" or "Local Applications."

* An abstract of these cases will be published as an Appendix with this paper, in a small volume, by Wm. Wood & Co.

CASE OF VERTICAL LUXATION OF THE PATELLA.

By G. PIERREPONT DAVIS, M.D.,

HARTFORD, CONN.

A FEW weeks ago I was summoned to a nurse girl' who was reported to have "put her knee out of joint." On entering the room I found the patient lying on her face, both legs extended, and the left foot pointing towards its fellow.

On turning the patient upon her back, the left patella was plainly seen in a condition of "vertical" displacement, *i.e.*, turned upon its inner edge, so that its upper surface looked toward the opposite knee. It was rigidly fixed, and the limb was entirely helpless.

I learned that while sitting upon the floor, playing with the baby under her charge, she suddenly reached forward, at the same time twisting her body partly around, in order to seize the child, who was a little out of her reach, and who, she feared, was about to fall. She immediately became conscious that an accident had befallen her knee.

The patient was etherized as she lay upon the floor. The whole limb was then elevated by an assistant, so as to relax the muscles in front of the thigh, and, by forcibly crowding down these muscles toward the knee with one hand, manipulating the patella at the same time with the other, reduction was effected with the utmost ease.

I report this case on account of what I infer to be its rarity, Prof. Hamilton stating in his work on Fractures and Dislocations, that but fifteen cases of this accident have been recorded. My friend Dr. Russell, of this city, however, has stated to me that he has seen a case of complete rotation of the patella, so that its articulating surface looked upward toward the skin.

I am of opinion that much of the difficulty which has been experienced in the reduction of this dislocation will be obviated by etherizing the patient and *completely relaxing* the muscles before *any attempt* at reduction is made.

FLEXIBLE CATHETER FOR IRRIGATING THE BLADDER.

By STUART ELDRIDGE, M.D.,

SURGEON-IN-CHIEF NORTHERN DISTRICT OF JAPAN; IN CHARGE IMPERIAL SCHOOL OF MEDICINE AT HAKODATE, JAPAN

IN certain of those cases in which irrigation of the bladder is desirable, the rigidity of the ordinary instrument renders its use inconvenient or impracticable. I have devised a form of flexible irrigator for use under such circumstances, and have found it a valuable addition to my urethral armament. The instrument is constructed as follows: Through the side of a soft rubber catheter (No. 10 to 12, English gauge), an opening is made by a broad needle, or the point of a lancet, at the distance of an inch and a half from the open end of the tube. Through this opening, force the point of an ordinary gum catheter of such size as to lie very loosely in the bore of the rubber instrument. In passing the smaller catheter into the larger one, the surface should be well wetted, and the stylet retained until the point of the gum instrument has passed into that of the rubber one, when the stylet should be removed and the instrument is ready for use. In a similar manner an irrigator may easily be extemporized from an ordinary metallic catheter, either male or female, by adjusting upon the open end of the instrument a short piece of rubber tubing, through the side of which a gum catheter is passed in the manner described above.

Progress of Medical Science.

BILLROTH ON THE PRESENT PHASE OF THE INFLAMMATION THEORY.—The opinions of Billroth on matters relating to surgical authority have always claimed attention, from the fact that he is both an original investigator and has a lucid way of describing what he has seen and read. He has lately been preparing a new edition of his book, and in recasting the chapters on inflammation and regeneration of tissues he has taken occasion to condense the prevailing opinions on these subjects and express them in a palatable shape. He pays a tribute to the faithful labors of Rokitansky, but thinks it must be conceded that his views have, in a great measure, been superseded by those of Virchow and others, who, during the last twenty years, have accumulated an immense amount of new material bearing on these questions. One of the first views introduced by Virchow was, that inflammation was caused by a disturbance of nutrition; subsequently, he located the commencement of the change in the connective-tissue cells, whose *formative activity* represented a most powerful factor in the process; the phenomena of *fluxion*, *stasis*, and *exudation* were accordingly made by him to play a subordinate rôle. The most recent investigations of Cohnheim and Samuel, published in 1873, add further proofs to show that inflammation is excited primarily by some changes in the tissues themselves, and not in the blood, and these changes give rise, secondarily, to the phenomena of dilatation, stasis, etc. Thus Cohnheim speaks of *a chemical alteration in the tissue of the vascular walls, especially of the veins and capillaries*, as the most important excitant of inflammation, while Samuel believes that there is *a disturbed relation between tissue, vessels, and blood*, whatever this may be. All these views were derived from independent studies by different methods. Billroth is inclined to believe with Cohnheim, that the alteration consists in a chemical change in the tissue, and he also believes that the products of it do not simply act as ferments by contact with the healthy tissue, but that they also get into the circulation and produce the ally of inflammation, viz., fever. The results of clinical observation justify him also in supporting this view.

As for the relation between these secondary phenomena and inflammation, it has been shown by Schiff, Cohnheim, Samuel, and others, that neither (1) the dilatation of the vessels, nor (2) the blood-stasis, nor (3) slight fluxions produce inflammation; but after these conditions have lasted a considerable time, with some intensity, there is a relaxation and softening of the veins and capillaries, which is followed by exudation, increased local heat, and possibly escape of red blood-corpuscles; and also, at the same time, as long as the circulation remains active, an enormous emigration of white blood-corpuscles. As to this latter fact, there seems to be no further doubt among microscopists that it does actually take place; and there is no distinction between such cells and pus cells, wandering cells, young exudation cells, and lymph cells. Virchow's idea that pus originated from the connective-tissue cells was opposed by the fact (1) that in many instances of inflammation the connective-tis-

sue cells appeared to be intact, and (2) by Cohnheim's discovery, in 1866, that these so-called connective-tissue corpuscles were white blood-globules that had escaped from the vessels, and he further observed that the escape was coincident with the formation of pus, while as yet there was no change in the connective-tissue cells, and accordingly the connective-tissue cells of the part took no share in primary acute inflammation. Whether they did secondarily, or at least later, was not known.

Now, as to what becomes of the emigrated cells, Billroth gives the views of Hering, that some leave the tissues by the lymphatics, and get back into the general circulation; others again appear on the surface of the membranes or on wounds, under the form of pus, and are swept off. In this way, after emigration ceases, the tissues can be entirely freed from the cellular infiltration, and they return, as also the walls of the vessels, to their normal condition. Other cells again remain and undergo various modifications; they can divide, as observed by Stricker and Key; sometimes they enlarge, and many nuclei are formed in them, and these cells may divide, as observed by Key. If the tissue that is thus infiltrated dies, the infiltrated cells perish with it, and they may then either be thrown off or remain under the form of a softened mass—the dry, yellow infarction which later may become tuberculous or calcareous, and may also cause a new inflammation about it.—*Wien. med. Woch.*, 26, 1874.

Malignant Pustule from Picking Horse-Hair.—Dr. Bartels publishes the following cases as furnishing additional evidence that the disease may be propagated through animal hair. A girl, fourteen years of age, came under treatment with a carbuncular swelling on the top of her shoulder. It had developed in five days from a pimple. At the time she was first seen the pimple had become a gangrenous ulcer, one centimetre in breadth, and near by was a vesicle filled with yellow serum; the upper part of the arm was swollen, doughy, and deep red, and there was high fever and great uneasiness. Twelve hours later the swelling had involved the entire arm, the right side of the face, and the upper portion of the breast and back, while the gangrenous spot had increased to three times its former size and was surrounded by a circle of vesicles. It was noticeable that the pain was not very severe at any time. Six incisions were made through the deltoid muscle, and parallel to the course of its fibres and the cut surfaces were cauterized with fuming nitric acid.

The fever then commenced to abate, the œdema disappeared in part, and convalescence commenced. The patient stated that three of her acquaintances had been taken sick in a very similar way. One was a boy who had the trouble fourteen days before hers commenced; he died of the disease, while a girl who was attacked only eight days before was still sick with it. The third case, her brother, was taken sick at the same time with herself, but recovered without surgical treatment. In all of these three cases, the pustule had been on the face, and all of them, excepting her brother, had been employed in picking over horse-hair, which they had taken home with them in large quantities. Her brother had not been actually engaged in this business, but had spent a good deal of time in the room where the picking was going on. She thought that the hair had been particularly dusty of late, which Bartels attributes to a possible admixture of cows' hair. He regards all these cases as instances of malignant pustule produced in some way by contamination from the animal hair, and he is inclined to believe that the poison was inhaled with the breath.—*Langenbeck's Archiv*, xvi. 2. 1874.

Billroth on the Repair of Tissues.—The following statements are given by Billroth as embodying the most recent views on the reparative process:

When repair commences in muscular tissue that has been injured or inflamed, with accompanying loss of substance, the space will be filled by wandering cells; the broken ends of the muscular fibres will grow out a longer or shorter distance, ending in one or more minute points. Coincidently, many nuclei appear in the growing end of the fibre; whether these come from the old nucleus or are new formations is uncertain. It also appears as if there were a complete new formation of young muscle-fibres between the old ones. So far as we know, it is uncertain where the cells originate that produce these intercalated growths.

In each injured nerve-fibre, whether at the periphery or at the centre, the axis cylinder, and subsequently the medullary sheath, degenerate for a certain distance, while the whole neighborhood is filled with wandering cells. Then the axis cylinder grows forward inside the nerve-sheath, generally under the form of one or more cords.

The growing cords meet and may unite with one another. The axis cylinder of the nerves is to be regarded as a long, protoplasmic process of a ganglion cell; if it be cut in any place, it grows again simply by a lengthening or protrusion of its substance. When the nerve-fibres in the tadpole's tail bud out, the future nuclei of the nerve-sheaths form spontaneously in the nerve-bud, without any participation of the existing nuclei of the nerve-sheath.

Most of the studies on the regeneration of epithelium have been done on the cornea, and the following facts have been ascertained: when repair commences, the epithelium cells that lie on the margins of the lost tissue put out buds, which become broader, and then separate to form independent cells. Some believe that the nuclei are obtained by a division of the nucleus in the budding-cell, others do not.

When repair takes place in vessels, pointed buds appear at the cut ends of the vessels a few days after the injury; some are short and some are long; in union by first intention they stretch over as far as the opposite side of the wound; when granulations form, they arch over and form loops.

We know nothing definitely about the formation of connective tissue, and the prevailing idea is that it can only be regenerated through the medium of young cells, but it is uncertain where these cells originate. Billroth favors an old view published by him previous to 1869, that the tissue is formed from the wandering cells, which are themselves derived from the connective tissue by budding. This is very similar to the view of Rokitansky, that in inflammation the tissue softens and then buds or forms branching excrescences, and indeed it is in accordance with what is seen in serous membranes, for vegetations often form in them in chronic inflammations; it is also known that certain sarcomatous tumors grow in a similar way.—*Wien. med. Woch.*, 27, 1874.

Early Maternity.—Dr. W. W. Munson, of Otisco, N. Y., reports the case of a girl, who, at the time he delivered her of a male child, was but thirteen years and three months old. The child weighed nine pounds. The secretion of milk was abundant. The mother was white, the father black, and the child illegitimate.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, December 1, 1874.

SANITARY INSPECTION OF OUR SCHOOLS.

THE necessity for some comprehensive and thorough sanitary regulation in our public schools has been repeatedly urged in these columns. The subject is of such great importance, bearing as it does so directly upon the health and physical well-being of the rising generation, that its continued discussion needs no apology. Ever since the Commissioners of Education of our city abolished the office of Medical Superintendent, the profession has interested itself in the study of many topics connected with school hygiene which before were left almost entirely to the respective district boards. As one of the results of such a course some very valuable, significant, and suggestive facts have been collected, proving that it was high time for medical men not only to educate the people to appreciate the urgency of sanitary reform in this matter, but to impress its necessity upon the school board.

Very particular attention has been paid to the present method of ventilation, and, astonishing as it may seem, very few if any of the class-rooms have any efficient apparatus that will give even an ordinary supply of fresh air. Not only is it proved that the air capacity of the different departments is far below the average, but that the air itself is contaminated directly or indirectly by other means than those of ordinary respiration. In some of the schools the primary departments are in cellars, while in others the apartments for the older scholars are gratuitously supplied with foul air from water-closets, undrained cellars, badly constructed hot-air furnaces, and defective sewer-traps.

We are not prepared to say that nothing has been done by the Commissioners to correct the evils to which we have alluded, but that they have not performed their whole duty in the matter is painfully apparent. It is a charity to suppose that much of the neglect in the discharge of their assumed responsibilities in the premises is due to ignorance of the absolute requirements of the case; but such an excuse can hardly be urged in their favor in the face of their deliberate action in abolishing sanitary inspection. The present state of affairs is bad enough as it is, but it is particularly deplorable in view of the increased attendance of scholars which will be the result of the enforcement of the law for compulsory education, which law takes effect the first of January of the coming year. There is no desire on our part to prejudge the motives of the Commissioners or to anticipate any of the plans which they may have formed for the emergency; but we cannot help feeling some solicitude on this point in view of their past indifference to sanitary requirements.

What we have said of ventilation applies with equal force to heat. In the majority of the schools a sufficiency of heat is generally maintained at the expense of ventilation, and *vice versâ*. In this connection we would refer to an experiment proving the point. The air in one class-room, in midwinter, with one window open, was found by analysis to contain carbonic acid to the extent of seventeen and two-tenths per ten thousand—four times more of the poisonous gas than it should. But this was very fair in comparison with the quantity of this gas contained in the same room with the windows shut, and with the thermometer marking a comfortable temperature. It was then found that the proportion was as high as thirty-two and two-tenths per ten thousand. This may be looked upon as an extreme case, but any approximation to such a proportion of carbonic acid is, hygienically speaking, frightful to contemplate. If we add to this lack of ventilation the chances of extra contamination of the air through the furnace-flues opening into the cellars, we become more and more impressed with the necessity for different arrangements for heating.

Aside from bad air, defective heat, and insufficient light, there are other matters connected with the present hygienic management of our schools which argue very strongly in favor of the necessity of medical supervision; for instance the time which should be occupied in study, the degree of mental tax capable of being borne by the scholars, the amount of exercise required in the open air, the positions to be assumed at the desk, etc. The importance of attention to these matters has been settled long ago by sanitarians, and the Commissioners have no right to refuse the scholars and teachers the benefit of observation and experience in that direction.

Not only could intelligent direction in sanitary matters do good in remedying the unhealthiness of school-rooms and the bad effects of too rigid mental discipline, but a great deal could be accomplished in preventing the spread of the contagious diseases of childhood. It is well known that scarlet-fever, measles, whooping-cough, and small-pox have a very favorable medium for propagation in our school-rooms. In fact, it is safe to assume that the majority of children who become the subjects of these diseases are infected by these means. Every physician who takes the pains to

trace the origin of these maladies is forced to such a conclusion. It may not be out of place to consider how much might be done by sanitary inspection to lessen the liability to such contagious influences. We cannot expect to eradicate the diseases from our schools, but any promise of saving precious lives should stimulate reasonable exertions in a proper direction. We have already seen how much can be accomplished in preventing the spread of small-pox by a timely vaccination of the school children. The late Medical Superintendent, Dr. O'Sullivan, has stated that out of forty thousand scholars vaccinated, not one suffered from small-pox. We have no equally effectual means to employ against measles, scarlet-fever, or whooping-cough, but we can use the means to narrow their ravages to the smallest possible limits. Children with contagious diseases should be kept away from school; while those who become sick while at school should be sent home at once, and not allowed to return until they can furnish a satisfactory certificate from their attending physician. In extreme cases, when any disease becomes epidemic, the school-rooms could be fumigated, and, if necessary, a vacation ordered for the purpose. It is a pertinent question in this connection to ask, How much the present spread of diphtheria in our city could be arrested by some such regulation of our schools?

In other cases, when endemic diseases are found in schools, we have seen how much sanitary inspection has accomplished in explaining the reasons why, and removing the causes. Every so-called school epidemic successfully arrested has a history, which is the strongest possible argument in favor of medical supervision.

But we need not multiply reasons for the support of our opinion; the argument is in fact so one-sided that it seems strange that any body claiming to be composed of intelligent men should fail to be convinced, and should seek to dodge any responsibility.

The changes which are to take place in the Board of Education, and which are necessitated by the limitation of the terms of service of some of the members, may in the end be salutary in making a reform in the hygienic management of our schools possible. The original Board was so unequivocally committed against any change in this respect, that nothing for the better could be expected. Let us hope that the new element, which is so shortly to be added to it, may infuse wiser counsels in the deliberations of the body, which in the end may prevail in favor of reason, justice, and common sense.

While upon this part of the subject we take occasion to repeat the recommendation made some time ago, that not only the office of Medical Superintendent be re-created, but that there be a medical man upon the board to represent the profession upon this important question, and a competent physician be appointed to fill it. If there is any objections to such propositions we should like to hear of them.

Reviews and Notices of Books.

THE PHYSIOLOGY OF THE CIRCULATION IN PLANTS, IN THE LOWER ANIMALS, AND IN MAN. By J. BELL PETTIGREW, Lecturer on Physiology at Surgeons' Hall, Edinburgh. London: Macmillan. 1874.

THIS volume consists of a summer course of lectures given in 1872 to the Fellows of the Royal College of Surgeons. The most interesting and original part of the course is that devoted to the elementary conditions of muscular movement, and their various combinations in the organs of circulation. "When a muscle acts, its volume always remains the same; when it contracts, it bulges out laterally; when it relaxes, it increases in the direction of its length." Therefore, "its ultimate particles, whatever their shape, must have the power of acting in two directions, in the direction of the length of the muscle and across it." The movements of the sarcous elements of muscles are likened to those of the white blood-corpuscles and of the amœba. "When it (the amœba) sends out the lateral processes or elongates in the direction of its breadth, the body of the animal is shortened. When the lateral processes are shortened, the body of the animal is elongated. The analogy is complete, and there is every reason to believe that the movements of the amœba and of the sarcous elements of a muscle are identical." The elongation of a muscle is therefore an active phenomenon quite as much as its contraction, the state of rest being intermediate between the two. In this state of rest each sarcous element is supposed to be in the form of a cube. When the muscle contracts, or increases transversely, the transverse diameter of the sarcous element increases, by a spontaneous movement of its mass, and the diameter at right angles with it necessarily shortens in proportion. The reverse occurs as the muscle relaxes, *i.e.*, increases lengthwise; and only after such opposite movement does the element return to its original form, and the muscle to its intermediate state of tension. The relaxation of the muscle is therefore self-determined, and is not caused by the contraction of an antagonist nor by elasticity. The muscles do not act upon and against each other, but upon the bones they are intended to move. Otherwise there would be an inordinate waste of muscular energy. "The muscles are correlated and their movements co-ordinated." "The movements of the voluntary and involuntary muscles are in some senses identical." The absence of striations and sarcous cubes from the involuntary muscles does not contradict this identity in the author's opinion, for "movements definitely co-ordinated and very precise can occur in tissues which are structureless or homogeneous." Indeed, the involuntary hollow masses supply the type or pattern on which the voluntary muscles are formed. The relation between the bodies of the stomach, bladder, and rectum, and their respective sphincters, is similar to that existing between the flexors and extensors of a limb, a relation, not of antagonism but of alternation of action. When the fibres composing the bodies of these hollow viscera shorten and broaden, the cavity contracts, tends to close. At the same time the fibres of the sphincters narrow and elongate, and their cavity opens. Schiff has already insisted on such spontaneous active dilatation of the cardiac and pyloric sphincters of the stomach. The heart obeys the same law, its two sets of cavities opening and closing spontaneously and alternately, and not in consequence of the presence of blood acting as a stimulus to contraction. In the embryo the heart pulsates while it is

still only a mass of cells. The author advances another argument, much less convincing. He says that when the ventricle has contracted it forms a solid mass that the current of blood could never force open, hence this mass must open spontaneously. But it has never been asserted that the stimulus of blood produced the relaxation, diastole, opening of the ventricle, but that this having occurred spontaneously, the blood excited the muscle to a new systolic contraction. The author has made some new dissections of the mammalian heart, prepared as follows: The ventricular cavities are stuffed with bread crumb or bran, and the organ is then boiled four to six hours (eight to ten for ox or horse). It is then soaked in alcohol for about a fortnight, when the fibres will be found to separate with great facility. By this method the author succeeded in demonstrating seven layers of muscle—three internal, three external, one central. Of the three outer layers, the first is nearly vertical, the second oblique, the third more oblique, the central layer completely transverse. The internal layers return by a similar, but inverse gradation, to the vertical direction. The fibres of corresponding external and internal layers, *i.e.*, one and seven, two and six, etc., are continuous in the left ventricle at the left apex, and in the right ventricle, along the track of the anterior coronary artery. This successive embrace of the layers explains alike the rolling movement and powerful action of the ventricles. The blood is literally wrung out from them.

The author describes minutely the musculi papillares, and shows that between them run three spiral grooves, two directed to the under surface of the bicuspid valve, the third to the aorta. On the beginning of the systole the blood is moulded into three spiral columns, of which two force upward the bicuspid valve, and effect its closure, the third is projected out of the aortic orifice. As the contents of the ventricle diminish, the musculi papillares contract, and draw down the valve in a conical shape, so as to diminish the size of the cavity. The movements of the heart are not intermittent, for a continuous wave of motion is at all times passing over it, but its parts move and rest in succession. The opening and shutting of auricles and ventricles alternate like that of the bodies and sphincters of other hollow viscera. This, indeed, is easily seen by any one on a frog, whose heart, as Beau long ago observed, may be observed as readily as a book is taken off a shelf to be read.

The arrangement of the muscular layers of these various hollow viscera accords with that just described for the heart; and the author is ingenious in finding further homologies with the trunk and limbs of vertebrated animals. In the thorax the pectorals and deltoids run vertically, transversely, and at various degrees of obliquity, the intercostals, beneath, cross each other as in the letter X, while the serrati run at right angles to both. A similar arrangement is conspicuous in the abdomen. The posterior muscles of the thorax may be traced in the same way. Eliminating the element of bone (which, as the author observes, is only introduced high up in the ranks of life, and is secondary, therefore, to fundamental conditions), we have in the thorax and abdomen two hollow muscular masses, of which one opens when the other closes, and which are closely allied to the auricles and ventricles of the heart. The diaphragm descends when the thorax opens, *i.e.*, draws in air and blood, just as the mitral and tricuspid valves descend when the auricles are in diastole and aspirate blood. The heart in the thorax pulsates as it were within a larger heart.

The arrangement of the muscles on the limbs is like that of the trunk muscles, analogous to those of the heart. In the arm the biceps represents the longitudinal fibres, the supinator longus and flexor carpi radialis the slightly oblique fibres, the pronator radii teres and flexor sublimis the oblique fibres, and the pronator quadratus the transverse fibres. Throughout this succession of increasingly complicated combinations of muscular movement, the author finds recurring the original type presented by the sarcous element, and consisting of alternate widenings of the mass in directions at right angles to each other. Upon these spontaneous "vital" amœba-like movements, centrifugal or opening when extended transversely, centripetal or closing when in a longitudinal direction, depend not only the functions already described, but the peristaltic movements of tubes with muscular coats, whose fibres run at right angles to each other (intestine), or at right angles to elastic fibres (arteries). A wave of motion passes over these tubes as in the earthworm, the heart, affecting successive segments at successive times. When in any segment the circular fibres broaden and shorten, the longitudinal fibres lengthen and narrow, and both the centrifugal and centripetal actions concur in elongating the tube, which shortens again by a reverse action. The whole constitutes the peristaltic or vermicular motion.

In describing the conditions of circulation, the author is, moreover, too exclusive in rejecting the intervention of physical laws and analogies to circulation in elastic tubes. The experiments of Marey, Leandius Kirchoff, and others, have too well established this analogy for the larger arteries, where muscular fibre does not come into play.

The description of this central chapter has exhausted our space, so that we can do no more than refer to those preceding, where the author passes in review the circulation in plants, in vertebrates, and the human fœtus, and to those which follow, the first containing elaborate descriptions of the valves of the vascular system, based on original dissections, the last devoted to a more cursory review of the nerves of the heart in mammalia. We will, however, quote the most original suggestion in regard to the circulation of plants, namely, that the tubes containing sap are arranged in a series of siphons, one extremity of each siphon terminating in a surface of evaporation, either at the leaves or at the roots.

From the above extracts we need hardly say that these lectures contain much novel and interesting matter. There is, as the author himself observes, some redundancy, and many pages only useful to the novice; but they are easily forgotten in following the personal researches of the brilliant lecturer. His antagonism to many commonly received doctrines only renders the discussion of his own views more animating.

THE TREATMENT OF SYPHILITIC DISEASES BY THE MERCURIAL VAPOR BATH. By JOHN W. FOYE. Boston: Williams & Co. 1874.

THIS is perhaps a modern curiosity of literature. Without apparent object, unless perhaps it is his desire to be an author and to parade his book before a public to which he panders, it is difficult to understand why he thus takes excerpts from the books of Parker and Lee, and with his own unoriginal interpolations forms a volume which is noticeable for its want of smooth continuity. Not an original idea is given; even all of the advantages of the treatment are not evidently appreciated by the author, and his book is as unuseful as it is unnecessary. It is an example of the modern *cacœthes scribendi*. Its contents are long familiar to all by the writings of those who have more

authority, or by observation of the treatment of syphilis, which certainly must be more extended and clear than that of the author, as, judging from the book, it could scarcely be less.

A TREATISE ON THERAPEUTICS, COMPRISING MATERIA MEDICA AND TOXICOLOGY. By H. C. WOOD, Jr., M.D. Philadelphia: J. B. Lippincott & Co.

To the student of medicine and to the practising physician a thorough work on therapeutics is certainly one of the greatest necessities which they experience. Indeed, this want cannot be exaggerated, and to fill it have many men tried with good intention, but without success. After looking over works on therapeutics in either of the three great languages, one turns away disappointed, as there are essential deficiencies in all. What appears so simple is really so difficult, and it is given to very few men to possess a peculiar fitness to write upon therapeutics. The reasons are obvious: Want of proper experience, proper mental training, a mind not carried away with theories and hobbies; indeed it is very doubtful whether one man will ever in a thorough manner compass the subject. The tendency of to-day is to divest works of this class of the irrelevant and dull details of materia medica, and to devote more space to therapeutics proper, and this is certainly a step in the right direction. As a judge of books, we must say we took up this work with a kind of prejudice, in consequence of the long and somewhat verbose and desultory preface which we find in it. It seems to us that if an author wants to prove the necessity of his work, or his peculiar fitness for it, or again, his general plan of handling his subject, he can do it at much less tedium to his readers. To review a work of this kind is almost to review a dictionary; so we shall, rather than consider details, speak of its general scope. It must be said in justice to the author that his studies and experience are such that he is more than some others fitted for the task of writing a work on therapeutics, leaving out unnecessary detail of facts. There is in the work much useful information, showing long, painstaking observation. There is no evidence of blind reliance on certain drugs, or certain modes of practice. Starting with the physiological action of drugs, in the study of which the author has long labored, we find the action in pathological conditions clearly traced, and any section can be read with profit. Though there are points in the work which will admit of criticism, it must be confessed that, as a contribution to therapeusis pure and simple, it has reached nearer the mark than any work now before the public. There is an evidence of much labor of its author to familiarize himself with what others have done, and in the main he gives their views fairly and fully. Taken as a whole, it is a work which can remain on the desk and be consulted from time to time with benefit, which gives good therapeutic advice in a practical way.

CARDIAC THROMBOSIS IN DIPHTHERIA. (DE LA THROMBOSE CARDIAQUE DANS LA DIPHTHERIE.) By BEVERLY ROBINSON, M.D. Paris, 1873.

THIS *brochure* is a well-written contribution to a subject which has not heretofore been largely or carefully studied, and which, from its importance, well merited a full consideration. It is handled by the author in a very thorough manner, and his work gives evidence of much clinical research. The numerous cases which are incorporated in the book are well reported and are of much interest. The author draws up his conclusions in the following clear, aphoristic form:

1. Cardiac thrombosis is a tolerably frequent complication of diphtheria.

2. The elastic fibrinous coagula entwined in the valves, or which adhere to the walls of the heart, are formed before death.

3. They are often developed before death in children who are far from having become extremely weak. They have several times been recognized when the child appeared to be convalescing, and there was indication of a coming cure.

4. They give rise to very grave symptoms, which make their presence suspected.

5. Their diagnosis is important in the double point of view of prognosis and treatment, as their existence renders the fatal termination of the disease almost certain, and renders useless, in some cases at least, the operation of tracheotomy.

6. The polypoid clots are frequently the proximate cause of the grave condition of the patient, and which is not due to its disease itself.

7. Death may occur in a sudden manner immediately after the occurrence of this formation, or even after a longer or shorter state of suffering.

The work is interesting to all who desire to familiarize themselves with the complete clinical history of diphtheria, and an acquaintance with its contents may perhaps avert unnecessary operations of tracheotomy. On the cover and title-page the author is put down as Robinson Beverly, a transposition which is to be explained probably by the unpardonable carelessness peculiar almost to the French in quoting names of foreigners. The present work is by a New York physician, and was his inaugural thesis, submitted to the Faculty of Medicine of Paris.

A PRACTICAL TREATISE ON THE SURGICAL DISEASES OF THE GENITO-URINARY ORGANS, INCLUDING SYPHILIS. By W. H. VAN BUREN, M.D., and E. L. KEYES, M.D. New York: D. Appleton & Co. 1874.

To those who endeavor to keep themselves well read in the branches treated of in this work, the necessity of its publication has been felt quite seriously of late years. In these days of multiplicity of authorship it is a fact of some satisfaction to a writer that his theme is one which is so interesting and important as to warrant its elaboration into a volume. So much material progress has been made within the last few years in the study of the genito-urinary diseases and syphilis, that the works which were before the public were rendered almost obsolete. The necessity for the work being conceded, it certainly is a matter of profound satisfaction to the profession, as indeed it was of vital importance to them, that it was undertaken by men who by their position are so eminently fitted for it. For many years the name of the senior author has been identified with the careful study and practice of these diseases, and he has been justly looked upon as one of our foremost, if not the foremost, surgeons of the branch. His fitness to undertake the work is undeniable, and in it he has associated with him a gentleman who has long made these diseases a special study, and who has already communicated papers of great value on these topics. It is rare that authors are so eminently fitted for a task, and considering the extent and importance of the present one, the fact is very auspicious. The portion treating of diseases of the penis is very concisely written, practical in character, and in the matter of treatment clear and simple. In few works are the diseases of the penis so well treated of in so small a space. The chapter upon Urethral Fever is especially well written, and contains the recent views advanced regarding the condition. Perhaps one of the best portions of the book is that treating of stricture. The condition is well described in all its phases,

the necessary instruments are designated, and the treatment is laid down in a manner at once simple and practical. Indeed, in these days when urethrotomy is pushed to an incredible degree, when, according to certain theories, which it must be confessed are undemonstrated by practice, every man should be cut at the meatus until he has a hypospadias, and his urethral canal should be, by means of dilatation and remorseless cutting, rendered almost if not of the size of his œsophagus, it is refreshing to read such words of cheer as are contained in this volume. It shows that every surgeon of genito-urinary diseases does not vie with Reybard of old in the depth and number of their incisions of the urethra. On the contrary, here we have clearly set forth what gradual dilatation will do, how to do it, when and how to use urethrotomy and divulsion. Such chapters as these certainly must have a salutary and perceptible effect upon the growing fashion to incise the urethra. The various diseases of the other organs, and their treatment, are well described, and any person can read the chapters devoted to their consideration with great satisfaction and profit. We would say that the chapter upon Maladies Involving the Genital Function is one of the best in the book—one which is usually treated of in a mawkish, sentimental manner, but which here is written in a markedly philosophical way, and supplemented with practical, sensible details. On the whole, the portion of the work devoted to genito-urinary diseases is admirably written; not being verbose it is terse, without being vague it is clearly practical. Chancroidal ulcers and their complications are fully described; their treatment is given at length, and their differentiation from syphilitic ulcers is brought out in a table of exceptional clearness of detail. The various chapters upon syphilis show a thorough acquaintance with its manifold forms, which are well described. Perhaps exception might be taken to the classification of the dermatic lesions adopted by the authors as being founded on an unscientific basis; yet as the efflorescences are so well described, any shortcomings in their classification is readily looked over. The important subject—treatment of syphilis—is well handled, and its careful perusal will be of benefit in inculcating sound therapeutical doctrines. The chapter upon the Nervous Affections of Syphilis is, as might be expected, considering the valuable contribution the authors have already given us, tersely and admirably written, and contains information of much importance. While as a whole the work is of great value from the fact that the personal experience and knowledge of its authors is given, they have enriched it very materially by adding the views of others. Indeed, a book rarely appears in which the author is as familiar with what others have done in every branch as there is evidence of in this volume. Besides this, there is an undercurrent of candor in stating the views of others, which may well be largely imitated. All things considered, the authors have given us an invaluable work, clear and not in the least obscure, true and practical, such an one as can be consulted with profit, in which treatment and principles of treatment are clearly laid down. In seeking helping hints as to practice, one noticeable feature will be found to be the directness of statement, from which the reader gleans definite ideas rather than desultory unsatisfactory hints. The work certainly fills a void not filled, and much felt, not only in English-speaking countries but also on the continent.

THE PHYSIOLOGY OF SCEPTICISM AND PHENOMENALISM. By JAMES ANDREWS. Glasgow: Jas. Maclehose. 1874.

THE little work bearing the above title shows fruit of the highest intellectual labor. Without a preliminary word the author enters upon his task, and ends by giving us fifty-eight pages of "solid sense," if we may use this expressive adjective. Mr. Andrews' essay is logical and concise, and from the excellent impression it has given us we unhesitatingly say that it is the best book we have yet seen upon the subject of which it treats.

After defining the word "phenomenon," he says: "The word 'phenomenon' in this essay is used to signify that which appears to be, but is not what it appears. Thus, in a dream I appear to see and hear, and move about transacting business as if I were awake. This is appearance only—phenomenon. . . .

"In the existence of phenomena lie the justification and necessity of metaphysics. The fundamental problem of metaphysics is, how are phenomena in general possible? We are deceived; there is no blinking the fact. We cannot look, listen, or move without being deluded; appearing to see, hear, or move, while we neither see, hear, nor move. The fact is undeniable—how is it possible?"

"The answer of scepticism is, that the problem is insoluble; its practical conclusion is, that the appearance is as good as the reality; the belief, persuasion, or delusion of knowing is quite as good as really knowing; sometimes a great deal better, therefore take things easy. You cannot get rid of appearances; you cannot distinguish realities when you suppose you have found them different from their phenomena; it is therefore indifferent which you get."

Ancient and modern metaphysics are compared and analyzed, so far as their relation to the subject is concerned. The phenomena of consciousness, the existence of delusions, the various conditions of the will coexistent with a disturbance of some of its agents of conduction are discussed in a very scholarly manner, and a thoroughness entirely Scotch.

It will hardly do the little book justice to discuss its merits in this small space allotted to the reviewer; it is well worth reading and studying. In conclusion, Mr. Andrews adds: "We might go on indefinitely, explicating all the great problems of philosophy by the same method; but meanwhile enough has been said to show in general how phenomena are possible, and with a demonstration of their possibility, scepticism and phenomenalism, as systems, 'disappear.'"

THE PHILOSOPHY OF SPIRITUALISM, AND THE PATHOLOGY AND TREATMENT OF MEDIOMANIA. Two Lectures by FREDERICK MARVIN, M.D., Professor of Psychological Medicine and Medical Jurisprudence in the New York Free Medical College for Women. pp. 68. New York: Asa K. Butts & Co. 1874.

IN striking contrast to Mr. Andrews' book just noticed, is that which bears the above pedantic title. "It is a sad thing that in the nineteenth century one can find occasion to write such lectures as these," says the author in his preface. We quite agree with him, and sympathize with his readers.

After a rambling chapter or two upon spiritualism, which are nothing more nor less than a *réchauffé* of what has been written by others for years upon this fruitful subject, we are brought to the second part of the book, the study of *mediomania*, discovered by the author. Mediomania is hardly more than a common form of melancholia dished up with a dash of hysteria. Dr. Marvin cites the cases of several individuals, principally spiritual media, who have been treated by him for emotional excitement. It is unnecessary to say more.

The whole style of the book is exceedingly bom-

bastic, and some of the passages are written with such a reckless poetical license that we must give a few specimens of the author's language.

On page 60, we are told "many a noble friendship has been destroyed, and many a rash deed performed, for want of sufficient pepsin to effect the digestion of a certain article of food in a given time."

On the same page the author has presented us, in a rude wood-cut, with some rare post-mortem appearances which he has discovered, as characteristic of this important disease (?), viz., broken uric acid crystals.

The crowning sentence of the book would do credit to the most enthusiastic sophomore. He says on page 62, in speaking of *protean insanity*, "She enters by the gateway of the cerebro-spinal system and rides upon the lightning of the motor nerve; she enters the arterial channels, and floats on the shining discs of blood down long generations."

Reports of Hospitals.

BROOKLYN CITY HOSPITAL.

Notes of Practice and Peculiarities in Treatment.

As a dressing the surgeons are very partial to styptic cotton, especially for chronic ulcers; first scarifying the surrounding tissues, apply layer of the cotton, and strap over this. The rapidity of cure sometimes is wonderful. Besides the power of healing, its antiseptic properties are good.

As a general local application for chancres and syphilitic eruptions, the following is used with marked success:

Ungt. zinci oxide,
" hydrarg. chlor. mite, āā;

while for internal use the ward prescription is,

Hydrarg. binoid..... gr. ij.
Potass. iodidii. ..... ℥ ss.
Syr. sarsap. co.,
Aquæ, āā..... .... ℥ ij.
M.—℥ i. t. i. d.

Iodoform locally applied after cauterizing a chancroid seems to have a good effect. Oleate of mercury in the treatment of orchitis is used with benefit. Applied locally to the indurated testicle, absorption is often rapidly promoted, though its irritating effect to the skin is not pleasant.

As a treatment for specific bubo, ungt. hydrarg. locally applied, alternated with

Tr. iodine..... ℥ iv.
Glycerine..... ℥ ij.
M.—Painted over the indurated glands.

In simple bubo glycerine externally has been used with good results.

In phagedenic bubo, ferri et potass. tart., internally and externally, is exclusively used.

Internal urethrotomy is employed in most cases of stricture, with, as yet, no unfavorable symptom.

Hydrate of chloral has been used satisfactorily as an antiseptic lotion, gr. xx. to Oi.

An interesting case of *hydro-hematocele* was admitted to the hospital. The patient was tapped for hydrocele in a New York dispensary. According to his statement he was cut twice, the first one being a dry tap, the second bringing blood. He was then sent home. Considerable hemorrhage; picked up in the street; brought to this hospital showing signs of excessive bleeding. Scrotum eighteen and a half inches in circumference, four (4) times the size it was before the operation, and bleeding from two incisions. Hemorrhage controlled by pressure and cold applications. Few days after admission scrotum laid open, when it was found that the tunica vaginalis had not been pierced; the blood external to the sac.

Exostosis of Humerus.

Patient, while playing ball, noticed for first time a hard lump upon the arm, inner aspect of deltoid. Imagining a dislocation, went to his family physician, who corroborated the patient's diagnosis, calling in consultation one or more physicians. Worked hard for a half hour (more or less) in the vain attempt to reduce their dislocation. Then sent him to the hospital, where an exostosis was diagnosed, with no dislocation, the patient having perfect use of his arm.

Police Cases.

Man found unconscious upon the street; been drinking. On admission, inequality of pupils and complete coma. Head carefully examined. *No external marks of violence.*

Autopsy.—Fracture of skill, with rupture of middle meningeal.

Young man fell from wagon, striking upon head; slight contusion back of cranium; comatose; inequality of pupils, etc.

Next day convulsions set in; had continued for two days, when wet cups were applied to back of neck, attended with their immediate cessation.

Femoral Hernia.

Patient *male*, age 19; has had reducible hernia for several years. Upon admission, swelling in left groin. Tumor painful, inflamed, and tense. Vomiting.

Taxis employed ineffectually; patient etherized; sac aspirated; and taxis being employed reduction took place.

Interesting feature is femoral hernia in male.

Cut Throat.

The patient was a man who made quite an extensive incision above the thyroid cartilage; the edges of the wound were brought together and carefully stitched, as is the custom; but in this special one we saw the effects of pressure upon the larynx by pent-up secretions; fortunately the stitches were cut in time.

Delirium Tremens.

Treatment in these cases very unsatisfactory; probably the most reasonable way is to give potass. bromide grs. lx., followed in an hour by chloral hydrate grs. xx. every fifteen minutes until three doses are taken. If sleep is not produced discontinue medicine and give plenty of nourishment, leaving the patient to wear it off.

Acute Dysentery.

Iced water injections, with suppositories of morphia and bismuth, submitted internally, sometimes produce a rapid cure.

Colles' Fracture (double).

Treated with anterior and posterior straight splints, compresses over both deformities; result in this case very good.

Esmarch's method employed in amputation of thigh for compound fracture of femur with extensive necrosis and an immense pyogenic surface. Patient was nearly moribund; union of flaps by first intention, and is now rapidly recovering.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 28, 1874.

DR. H. KNAPP, PRESIDENT, in the Chair.

INTRA-CANALICULAR ADENOMA OF THE BREAST.

DR. SATTERTHWAITE presented a diseased breast, which had been removed by Prof. H. B. Sands. The history was substantially as follows: The patient, a lady forty-five years of age, was married twenty-three years ago, and is the mother of three children. The first was an eighth-month child, and died at the age of three months, but as her physician recommended her to "keep her milk," she used a breast-pump. This gave her pain. Shortly after, she struck her breast against a door, and soon afterwards noticed that her milk was bloody. She nursed her second child without special inconvenience, using both breasts, but noticing that the right breast—the one in question—was somewhat larger than the other; it was also painful. About ten months before the birth of her third child there was a discharge from the nipple, as if, she said, from a blood-blister. She nursed the third child without difficulty, but there was always more or less pain in the right breast. About fifteen or sixteen years ago she first discovered lumps in her breast. Five or six years ago she noticed growths rising from the nipple. These were cauterized and disappeared, but afterwards returned. They were again cauterized, and again disappeared. When the breast was removed it was small and flattened; but there was a small hardened mass about the base of the nipple, while rising from it there was a growth of a pale pink color, resembling exuberant granulations and about three-quarters of an inch in height. Near the periphery of the gland there was a small firm nodule. On cutting vertically through the nipple and examining the tissue microscopically, these growths could be traced down into dilated milk-ducts, and one was found to spring from the wall of the duct about three-fourths of an inch below the nipple. The outer portions of these excrescences were papillary in character, but nearer the point of attachment they contained a very considerable amount of true gland structure, similar to what is found in the healthy breast. The name of adenoma seemed therefore appropriate, though it was proper to add that there was also a large amount of fibrous tissue about these glandular structures. As they also originated and grew in the ducts, they were therefore intra-canalicular. The tumor had been diagnosticated as an adenoma by the operator prior to its removal. The firm nodule spoken of before contained glandular tissue, though it was less in amount than the fibrous tissue that surrounded it. From the history of the case it would appear that the trouble commenced during the first lactation. The discharge of a serous fluid during the last pregnancy would seem to favor the view that there had been dilated ducts or cysts in the breast, which discharged their contents at that time. It was well known that growths of this kind were apt to be associated with these changes in the breast. It was exceedingly rare for such a growth to project through the nipple, at least no instance of this kind had been found in the books.

UNREDUCED STRANGULATED FEMORAL HERNIA.

DR. SATTERTHWAITE also presented an artificial anus, which, together with a portion of the small intestine connected with it, had been removed from a patient at the Presbyterian Hospital. The history was as follows: M. E., 40, single, was admitted into the hospital on the evening of the 9th of September, 1874. She stated that two and a half weeks previously she had an attack of vomiting and purging, which lasted several days, when the purging suddenly stopped while the vomiting continued. At this time she discovered a tumor in her left groin, but she felt no special anxiety about it as it had often appeared before and had disappeared again. The tumor, however, remained, giving her great pain, and had acquired increased size. During the week previous to admission she had a discharge from her bowels, following a dose of castor-oil. The vomiting continued until admission. When seen by the attending surgeon, Dr. Gurdon Buck, there was a flattened tumor in the left groin, about five inches in circumference, and soft in the centre, where the skin was also moist and discolored, and crepitation could readily be felt by palpation. Three days later an opening formed at a point a little below and opposite the middle of Poupart's ligament.

Fæces were discharged through the opening, though never so abundantly as by the rectum. The patient was much exhausted by the sloughing which took place about the artificial opening, and she gradually sank and died seven days after admission. At the autopsy it was clear why there had been no continued constipation. The portion of intestine that was involved—the ileum, about four feet above the ileo-cæcal valve—proved to be engaged in the femoral canal, but only at its periphery, that is, at the farthest point from the attachment of the mesentery. The amount of tissue actually lost by the intestine could not have been greater, probably, than a twenty-five cent piece, and consequently the calibre of the intestine was very slightly diminished, and the fæces could pass quite readily to the rectum. There was acute enteritis, but no peritonitis, and there were no adhesions between the folds of intestine. Around the ileum, where it was attached to the femoral opening, there was a slight reddening; but there were no other signs of inflammation further than those already mentioned.

RUPTURE OF BLADDER FROM KICK IN PERINEUM.

DR. MASON presented a bladder removed from a boy aged eleven. This patient, six days before his admission, was kicked in the perineum by a playmate. He complained of some pain, and for some hours afterwards was unable to pass his urine; then the bladder was evacuated voluntarily several times during the remainder of the day on which the injury had been received. After this, again, he had retention, which condition continued for forty-eight hours, necessitating the use of the catheter. This operation was performed twice daily, until admission to the hospital. During this period of six days no pain was complained of, and no bloody urine had shown itself.

Dr. Mason saw him for the first time July 10. He was then running about the ward, and only complained of an inability to pass his water without assistance. A very careful examination was then made, which resulted negatively in the direction of a diagnosis. There was no pain on pressure above the pubes; no sign of any injury about the perineum, and a number 12 bougie (French scale) was passed with ease. A silver catheter of larger calibre was also introduced without difficulty, and drew off some clear urine. But the daily use of the catheter became imperative, the urine being sometimes clear, sometimes turbid, sometimes of dark color, and not unfrequently was of an offensive odor. On the 12th of July some blood

made its appearance in the secretion, coincident with which was a complaint of pain in the hypogastrium. A poultice was then applied to the bladder, and the organ was washed out. July 19, while in a warm bath, a small quantity of urine was passed voluntarily.

During the afternoon of July 20, without any notable change in the vesical symptoms, the patient rolled his head upon the pillow, became drowsy, the pupils became dilated, the face somewhat cyanotic, and he fell into a drowsy state. This condition lasted, however, for half an hour, when he awoke and seemed to be as bright as usual.

July 25. He was suffering from more pain, and the house-surgeon, in attempting to introduce a catheter, felt for the first time an obstruction. Dr. M., who also saw the patient on that day, had a similar experience. Rupture of the bladder was then for the first time suspected. Dr. M. passed his finger into the rectum, for the purpose of assisting the passage of the catheter, when, to his surprise, he encountered a swelling in the neighborhood of the ramus of the ischium. The patient was then etherized, and the bladder was opened the same as for the operation of lithotomy. Bloody urine flowed out, and the organ, which had been very much distended, collapsed at once. Passing the finger into the bladder, a soft and curious swelling was felt.

The operation was performed at 5 o'clock, July 25. At nine o'clock that evening the bladder became again distended, when the house-surgeon introduced a catheter and relieved him. The catheter was used daily until the 22d, when the patient was again etherized for the purpose of examining the wound. The finger being passed into the wound pushed something before it.

July 26. Dr. M. passed Thompson's urethral dilator into the wound, and a metallic catheter was left in the bladder. This instrument gave rise to so much pain that it was removed, as was also the case with a flexible catheter which had been employed subsequently.

July 27. The patient complained of more pain, and the abdomen became tympanitic. Relief from these symptoms was obtained by warm applications.

July 28. A large quantity of pus was discharged from the wound, attended with a feeling of a good deal of relief. From that time until death the urine flowed freely through the artificial opening. On the 8th of August he was attacked with diarrhœa, to which he finally succumbed. A few days before his death he also had a good deal of cough, and developed the usual symptoms of pleurisy.

The autopsy was made the day following by Dr. Delafield. The right lung was the seat of recent pleuritic adhesions. The right kidney, ureter, and pelvis of kidney contained pus. The entire organ was enlarged, and there was a general infiltration of pus through its substance. The wall of the bladder was thickened; its mucous membrane covered with pus, and in its lower and posterior portions there was a large rupture. One of the torn edges infiltrated with pus projected into the cavity of the viscus. There was also a rupture of the urethra just in front of the neck of the bladder. Besides this there was some pelvic peritonitis; the anterior portion of the rectum was bound down, so that Douglas's cul-de-sac was bridged over and filled with urine.

The reasons why the urine flowed freely after the lateral section and the use of Thompson's dilator, and not afterwards, were quite apparent on autopsical examination. Passing the finger through the wound, one portion of the rent was seen to fold directly over the neck of the bladder, and to be covered with granulation tissue.

Dr. Mason remarked that some two years ago he had had occasion to operate upon a patient by lateral section two days after rupture of the bladder. In that case the patient's life was saved. He was convinced that had there been any difficulty in evacuating the bladder on the day of admission, which difficulty would have necessitated a rectal examination, the real nature of the case would have been easily detected, and the operation would have been performed to better advantage.

FIBROMATA OF THE LOBULE OF THE EAR.

Dr. Knapp exhibited two fibromatous tumors, removed by operation from the lobules of the ear of a negress, which tumors had been occasioned by the wearing of ear-rings. One of these growths was the size of a nutmeg, the other that of a hen's egg. They were composed of connective tissue. In removing the larger tumor the flaps were made from the superior surface of the growth. These were curved in shape, with their convexities downward. The external flap was longer than the internal one, and when both were brought together to form the lobule the wound was on the internal aspect of the latter.

PERSISTENT WHEEZING RESPIRATION AND ENLARGED BRONCHIAL GLANDS.

Dr. Lewis Smith presented the thoracic organs removed from an infant, aged five and a half months, that died in the Infants' Asylum. The attention of Dr. S. was called to this case about the first of September. He was informed at that time that this baby had had a wheezing respiration for a week. The temperature was normal, the respiration somewhat accelerated, and the pulse was 90. The wheezing occurred in inspiration and expiration, and appeared to be produced in the larynx or in the trachea. The mother of the child having phthisis, and a careful examination of the throat of the child revealing nothing unusual, the conclusion arrived at was, that there was an enlarged bronchial gland pressing either upon the bronchial tubes or upon the trachea. This wheezing respiration continued throughout the life of the child, and its persistency was one of the main confirmations of the diagnosis. At first the lungs were sound, but in the course of a week or more febrile symptoms set in, tubercles became developed, and, with an attendant diarrhœa, terminated the life of the patient October 20.

At the autopsy several bronchial glands were discovered undergoing cheesy degeneration. The largest of these was located nearly at the point of bifurcation of the trachea, but pressing mostly upon the right bronchus. The mesenteric glands were also cheesy. Tuberculous deposit was found in both lungs. The spleen contained a few small tubercles, as was also the case with the liver. The brain was not examined.

ACUTE NEPHRITIS—COMA.

He also exhibited a pair of kidneys removed from an adult female, aged 34, who having been a subject of syphilitic disease, but having at the time no manifestations of the disease, became suddenly comatose, and died in thirteen hours after. He did not see the patient during life.

At the autopsy the brain was found normal; the kidneys were, however, intensely congested, and presented the general gross appearances of acute Bright's disease. Associated with this condition there was found albuminous urine in the bladder.

The Society then went into executive session.

NEW YORK SOCIETY OF NEUROLOGY AND ELECTROLOGY.

Stated Meeting, October 19, 1874.

THE PRESIDENT, DR. MEREDITH CLYMER, in the Chair.

A MEMORIAL notice of the late Dr. Jeffries Wyman, a Corresponding Member, by Dr. S. G. Webber, of Boston, was read by the President.

A memorial notice of the late Dr. Francis Edmund Anstie, of London, a Corresponding Member, by Dr. Alfred L. Carroll.

The special order of the evening was a paper "On the Combined Administration, chiefly Hypodermically, of Chloral, Morphia, and Atropia," by Professor Roberts Bartholow, M.D., of Cincinnati, a Corresponding Member.

COMBINED ADMINISTRATION OF CHLORAL, MORPHIA, AND ATROPIA.

Dr. Bartholow began by stating the desirableness of further knowledge of the reactions which ensue when remedies affecting the nervous system are conjointly administered. He had to offer to the Society a condensed summary of the results obtained from the simultaneous administration of chloral, atropia, and morphia.

Chloral differs from morphia, when injected subcutaneously, in the more decided systemic effects and the less local impression on the sentient nerves. As regards the systemic effects, the action of chloral is very much the same when administered hypodermically as by the stomach. The chief danger is an arrest of the respiratory movements. Chloral does not exert any chemical action on atropia when the two are held in solution together, for dilatation of the pupil of a cat takes place when the combined solution is instilled into the eye. Dilatation of the pupil also happens when they are administered hypodermically together. An apparent antagonism is observed as regards their action on the heart when the solutions of chloral and atropia are placed in contact with the heart of a frog when in position in the chest, after division of the medulla, or when the heart is removed. The action of the heart is further found to continue much longer when a lethal dose of chloral is administered together with atropia. In rabbits the same result is produced by the conjoined administration of the two agents.

Atropia is found to prolong the chloral narcosis several hours in rabbits, and diminishes the sensibility to pain. In man the excitant action of atropia hinders the occurrence of the chloral narcosis, but rather deepens the sopor when it at last supervenes. The effects of atropia last much longer, and are, apparently, in no way prevented by chloral.

Morphia deepens in every way the effects of chloral. Dr. Bartholow found, in the course of some experiments on himself, that many of the unpleasant effects of morphia are modified, as regards the wakefulness caused by the latter, but are not modified as regards the subsequent nausea, vomiting, vertigo, and constipation. When the two agents are administered conjointly, a much less quantity of chloral is necessary in order to produce sleep.

These agents act much more happily when administered simultaneously. Chloral causes sleep, morphia relieves pain, and atropia prevents or lessens the depression in the respiratory and cardiac movements caused by the other two, whilst it contributes to their cerebral effects.

These physiological studies are confirmed by the therapeutical results. The combination of chloral, morphia, and atropia is adapted to those cases of *insomnia* caused by pain, or in which chloral and morphia alone merely increase the cerebral excitement, as in hypochondria, puerperal mania, etc. This combination is also indicated in cases of fatty and irritable heart.

When pain is to be relieved, chloral is not so serviceable alone as in combination with morphia and atropia. The local administration—that is, the insertion of the medicament at the site of pain—is more effective than the merely systemic impression. This is especially the case in tic-douloureux, sciatica, and cocydynia, which are much more effectively treated by injections practised into the neighborhood of nerves which are the seat of pain. The combination of a local irritant and benumber with a systemic anodyne is more curative than either used singly.

In cases of *muscular spasm* the author of the paper had obtained excellent results from the combined use of chloral, morphia, and atropia, and he especially called attention to the efficacy of these agents in the cramps of cholera. Many cases of spasmodic asthma and hay-fever had been benefited by their conjoint administration.

The paper was discussed by Drs. W. H. Draper, A. McLane Hamilton, Putnam-Jacobi, Beverly Robinson, and Bartholow, after which the Society went into executive session.

ACADEMY OF MEDICINE.

Stated Meeting, November 5, 1874.

DR. AUSTIN FLINT, PRESIDENT, in the Chair.

ACUTE AND SUBACUTE SPINAL PARALYSIS.

THE paper for the evening was read by Dr. E. C. Seguin, upon "Acute and Subacute Spinal Paralysis" (inflammation of the kinesodic tract of the spinal cord).

This is a rare form of myelitis, which has only been recognized and described within the last few years.

The affection has received a variety of names, as follows: "Acute Anterior Spinal Paralysis," "Subacute General Anterior Spinal Paralysis," "Spinal Paralysis," "Myelitis of the Anterior Horns," "Acute Spinal Paralysis of Adults," "Affection of Adults like Infantile Spinal Paralysis."

The author of the paper preferred the terms "Acute and Subacute Spinal Paralysis," or inflammation of the tract, a name based upon pathological considerations.

The paper was a most systematic and exhaustive *résumé* of the history of the cases which have been already reported, together with a report of the cases which have fallen under the author's observation; and also the semeiology, diagnosis, pathological anatomy, etiology, prognosis, and treatment of the affection.

From an analysis of the cases reported, it appeared that there were present dysæsthesia, slight temporary anæsthesia, paresis affecting the extremities; and in rare cases face, eyes, tongue, and throat, not affecting the respiratory muscles and those of the abdomen, back, bladder, or sphincter ani.

Muscular atrophy of the paralyzed parts. Strong tendency to spontaneous recovery. The course of the affection may be acute, subacute, or chronic; the majority of the cases being of the first variety.

Diagnosis: *Positive*, from paresis affecting muscles

of rational life; atrophy and loss of electro-muscular contractility; *negative*, absence of spinal epilepsies, bed-sores, or disturbance of sphincter ani muscle.

The disease resembles infantile spinal paralysis in a most remarkable way.

Pathological anatomy: Granular degeneration of the ganglionic cells of the anterior horn of gray matter.

By far the greater number of cases have been males. Exposure to cold, or "catching cold," is a frequent cause.

Prognosis, as regards life, very good; relating to the paralysis, only moderately good.

The rapidity of the atrophy and loss of electro-muscular contractility are guides to prognosis. Treatment, same as in acute myelitis and congestive condition of the cord.

In the chronic form, treatment for the purpose of restoring vitality to the muscles.

The author of the paper inclined to the opinion that we have in this disease, which affects adults, a form of paralysis identical with infantile spinal paralysis; and with that view suggested the following formulated view of the affection:

Inflammation of the motor tract of the spinal cord.	In adults.	Acute. Subacute. Chronic.
	In children.	Always acute.

MEDICAL LIBRARY AND JOURNAL ASSOCIATION.

Stated Meeting, Nov. 6, 1874.

DR. J. C. PETERS, PRESIDENT, in the Chair.

ON OVARIOTOMY.

THE paper for the evening was read by Dr. B. F. Dawson, upon special points in Spencer Wells's "Ovariotomy Operations, with Remarks upon the Operation in General."

The following were the points specially referred to, and were brought forward by the author of the paper for the simple purpose of eliciting opinions from the profession regarding their value and practicability:

The *first* point was: Mr. Wells never permits more than seven or eight persons to be present at any of his operations. A larger number is very likely to impede the movements of the operator, etc.

Second. No person is allowed to be present who is likely to carry about with him infectious germs. Strangers are therefore obliged to sign a paper to the effect that they have not been near any case of contagious disease, or anywhere where they would be likely to get any infectious germs.

Third. Perfect quiet and avoidance of all excitement, both before and after the operation. No one is allowed to be present until the patient is anæsthetized, and no one is allowed in the room after the operation has been completed, except the immediate attendants of the patient.

Fourth. The anæsthetic now employed by Mr. Wells is bichloride of methyline. Mr. Wells is of the opinion that many cases have proved fatal from the vomiting which is liable to follow the administration of ether and chloroform, and it is possible that this is a prominent reason for using the methyline.

At this point the author of the paper made some general remarks relative to the use of this agent, and arrived at conclusions as follows, viz.: nausea and vomiting are much less likely to follow its administration than the administration of ether or chloroform; there is seldom any bronchial irritation; and the rapidity with which the anæsthesia can be produced, the absence of all vapors of the agent in the room, and the quickness with which the patient recovers from its influence, are all elements in favor of its adoption; certainly in favor of giving it a thorough trial.

Fifth. Mr. Wells always secures the patient to the table with straps. All movement is thus restrained, and the patient is prevented from impeding the operation.

Mr. Wells is exceedingly careful to prevent any blood from entering the peritoneal cavity. When the cyst is emptied the abdominal walls are at once pressed together by the hands of an assistant, and the edges of the wound brought to look upward. A large double sponge is placed in the abdominal cavity, to absorb all fluids while the pedicle is being secured and the stitches introduced through the abdominal parietes. Each suture, after its introduction, is given to the hands of an assistant, who sustains the edges of the wound until all the sutures are introduced; then the sponge is withdrawn and the wound closed, exercising the greatest precaution with regard to thoroughly closing it about the pedicle. He uses the clamp.

The patient is placed in bed always in the same room, in which there is a grate, and even in warm weather there is a small fire. The room is darkened.

DR. SIMS remarked that he was not willing to accord to Mr. Wells the palm of being the most successful operator for ovariotomy; but chose to bestow that honor upon Mr. Keith. With regard to limiting the number of spectators, and being sure that none of them carried any infectious germs about them, he took to himself the credit of inaugurating Mr. Wells in this very precaution. He called the attention of Mr. Wells to the importance of this precaution in the year 1866, and was glad to hear that he was active in its thorough enforcement.

Dr. Sims remarked that he acts altogether upon this principle, and insists upon it most rigidly, and is thoroughly satisfied that in this particular Mr. Wells is right.

In hospital practice it cannot be carried out.

With regard to bichloride of methyline, he was not at all disposed to accept it as an anæsthetic. As to its safety, he did not think it one whit safer than chloroform. It slows the pulse, it is true, and he had thought this an advantage in some instances.

With the experience we have he does not think we have a right to say that it kills only one in five thousand; for it is to be very much doubted if it ever has been administered that number of times. He was not of the opinion that it should be used by every ovariotomist.

As far as strapping the patient down is concerned, he saw no necessity for it. As to closing the wound very tightly about the pedicle, that is a matter of great importance. Probably every operator is very careful about that part of the operation, and he could not see how any operator could very well do otherwise.

He had *always* been opposed to the clamps, but to-day entertained somewhat different views upon that question than formerly.

DR. PEASLEE remarked that he, as far as he was individually concerned, admired the spirit of having the ideas of one man, especially of one who is an acknowledged leader in any department, given to us for consideration, as had been done in the paper for the even-

ing; but, as far as possible, he had acquainted himself with all the methods of operating which had been practised by all operators, and had given to the profession the result of no one man's experience, but the result of *all* men's experience. With regard, however, to the particular points presented in the paper, he might say that so far as exclusiveness, admission of spectators, etc., was concerned, he believed it to be very judicious. It would be far better, no doubt, for our patients, could this precaution always be taken; but we cannot do that in hospital as we can in private practice.

He fully agreed with Mr. Wells that the patient should be anæsthetized before she is brought into the presence of either instruments or persons who are to be present at the operation. The precautions with regard to quiet after the operation are also very proper.

He thought it hardly necessary to fasten the patient to the table; still it might happen, but exceedingly seldom, that it would be of service. It might be so, perhaps, if the anæsthetic should produce vomiting or something of that kind, which would have a tendency to discontinue the operation.

With regard to the admission of persons who have been in any way exposed to infectious influences, we certainly cannot be too careful. The peritoneal cavity has immense power for absorption, and that being the case the least particle of infectious material in the atmosphere about the patient may expose her to great risks, and should be carefully guarded against. In every case of ovariotomy the abdominal wall should be hermetically sealed. If a drainage tube be used its connections, *in every particular*, are to be air-tight. Every open tube introduced into the peritoneal cavity is an invitation to septicæmia. He believed that this position can be maintained, and receives the support of the profession.

He did not wish to be misunderstood; what he meant to say was: A tube is not an invitation, but an *open tube* is an invitation to septicæmia. It is the admission of air that is objectionable.

With regard to the kind of anæsthetic to be used, he did not see how any one could defend the use of chloroform in ovariotomy at the present time. The question with regard to chloroform was, he thought, that it should be entirely rejected. As between ether and methyline, he was inclined to use ether, and was not disposed to resort to anything else. There is a great objection to both ether and methyline if they are not administered in a proper manner. Ether should be administered simply to the production of anæsthesia and *not* asphyxia. If the patient is asphyxiated, the chances of success are very much diminished. When the anæsthetic has been carried to the point of producing stertorous breathing, it should at once be stopped, and the patient held at a point somewhat short of that.

Dr. Dawson remarked that *pure* methyline was scarcely liable to produce vomiting.

Dr. Pallen remarked that the subject of treatment of the pedicle seemed to be worthy of a few moments' consideration.

Mr. Wells treats all his cases with the clamp.

Dr. Peaslee uses the ligature, and drops the pedicle within the abdominal cavity.

Dr. Keith sears the pedicle.

Dr. Sims formerly used the silver-wire ligature, and dropped the pedicle within, and latterly has adopted the method of securing the pedicle by means of an iron wire, and retains it outside.

Dr. Dunlap, O., ligates the pedicle and drops it within.

Thus we are left in considerable doubt as to the best method of treating the stump.

Septicæmia and peritonitis have followed all these methods. It seemed to him that the best method is that latterly employed by Mr. Keith, namely, *searing* the pedicle; yet there are very many cases which he should dislike to trust to this means, on account of enlargement of blood-vessels which is sometimes present, and the consequent liability to hemorrhage. Would it not be well, then, to withhold any absolute opinion with regard to the treatment of the pedicle, and be governed by the peculiarities of each case? For one case may be much more prudently treated in one manner, and another case in another manner. At his next operation he proposed to first crush the vessels and then use the cautery, which he believed would effectually guard against the occurrence of hemorrhage. With regard to anæsthesia, may we not well ask, Whether the vomiting which may be present is always due to the anæsthetic employed? May it not be due in some cases even to commencing septicæmia? or may it not be due to the shock of the operation at times, etc., etc.? These are questions we are not now able to answer, but they are worthy of consideration.

Dr. Peaslee remarked that when the patient had taken no food for three hours previous to the administration of ether, he had never had vomiting ensue. Still he thought he should use the methyline at his next operation. He also expressed his preference for the ligature (catgut) in the treatment of the pedicle. If compelled to use the clamp, that devised by Dr. Dawson seals the abdominal cavity more perfectly than any which he had seen.

Dr. Sims remarked that to-day he was satisfied that the practice of securing the pedicle with a silver wire, and returning it to the abdominal cavity, is wrong. That was the plan, however, which he adopted for twenty years; but he had been led to abandon it for the reason that secondary hemorrhage had followed its use in two cases, in which he had seen the *post-mortem*, and he abandoned its use at once. As soon as the silver wire was dropped, he resorted to the method of treatment adopted by Dr. Peaslee at once, and continued that up to a certain date. One day he had a somewhat broad pedicle to deal with, and he introduced a double ligature; and tied one-half of the pedicle with a silk thread, and the other half with the catgut ligature. At *post-mortem* examination he had found to his horror that the end of the stump was in a *sloughy* condition. From this case he hesitated with regard to the use of the ligature and return of the pedicle to the abdominal cavity. That sloughy state of the distal end of the pedicle was immensely suggestive. Now, to-day, he was of the opinion that securing the pedicle with the iron wire, which answers all purposes of a clamp, and keeping the pedicle outside, is the best method of management. With this view he had very much to retract of what he had said concerning the clamp in former years.

I now feel satisfied that the method introduced by Baker Brown will finally be accepted as the best, and that is the use of the actual cautery. When we get instruments perfected for applying the cautery, he believed it could be accomplished with great safety and certainty.

He proposed to have made a clamp with a gutter, so that when the pedicle was cut off even with the upper surface of the clamp, an extensive surface would be left behind for the application of the cautery, and when such a large surface of the stump had been well seared, it would be returned to the abdominal cavity.

He believed that a clamp could be constructed upon this plan, which would give sufficient surface for the cautery to act upon to prevent all possibility of secondary hemorrhage.

Dr. Sell believed that every ovariotomist should go to his operations prepared for any emergency, and then use his own judgment as to whether he would adopt one or other method of treating the pedicle. He remarked somewhat at length upon the percentage of mortality attending the various methods of treating the pedicle, and concluded by saying that he was simply prefacing himself, as he purposed to review the subject in a paper at some future date.

Dr. Peaslee remarked that he used the ligature because he had never had it *slip* or *give*, if the precaution had been taken to leave the stump undisturbed after the application. He had never had a case die from hemorrhage when the ligature was properly applied and the pedicle left undisturbed, and had never seen any indication of sloughing where the ligature has been applied. But if these accidents do sometimes occur, the same thing occurs after the use of the clamp and other methods.

ARMY NEWS.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 5, 1874, *to November* 18, 1874.

Cuyler, J. M., Surgeon.—Detailed as member of Army Retiring Board, to assemble in New York City on 16th instant. S. O. 240, A. G. O., Nov. 5, 1874.

Hasson, A. B., Surgeon.—Granted leave of absence for 20 days. S. O. 224, Military Division of the Atlantic, Nov. 12, 1874.

Moore, Jno., Surgeon.—Detailed as member of Army Retiring Board, New York City. S. O. 240, c.s., A. G. O.

Hartsuff, A., Assistant Surgeon.—So much of S. O. 233, c.s., A. G. O., as relates to Assistant Surgeon Hartsuff, is revoked. S. O. 244, A. G. O., Nov. 10, 1874.

De Hanne, J. V., Assistant Surgeon.—Assigned to duty as Post Surgeon at Fort Mackinac, Mich. S. O. 220, Military Division of the Atlantic, Nov. 6, 1874.

Wilson, A. D., Assistant Surgeon.—To report in person to the President of the Army Medical Board, New York City, for examination for promotion, and, upon its completion, to the Commanding General Department of Arizona for assignment to duty. S. O. 243, A. G. O., Nov. 9, 1874.

Woodruff, E., Assistant Surgeon.—Assigned to duty as Post Surgeon at Fort Niagara, N. Y. S. O. 220, c.s., Military Division of the Atlantic.

Medical Items and News.

American Public Health Association.—The meeting of the Am. Public Health Association commenced in Philadelphia, Nov. 10th, and proved of such interest, that it was continued a day over the appointed time. The papers presented were generally of a high order, and gave the most advanced views of the students of sanitary science. The Association is commanding the aid and influence of many of the foremost men of the medical profession. They are coming more and more to feel how the subject of Hygiene underlies all artistic methods of treatment.

Prof. Hartshorne ably discussed the causes of the excessive infant mortality of cities. Hospitals and hospitalism was very thoroughly discussed in the papers of Drs Gross, Billings, Pepper, and Carl Pfeiffer of New York. It was claimed by all that there is great need of new investigation of the whole subject. No one advocated the building of hospitals in their former compact structure, but many of the wards should be in buildings only connected by stairways. One or more wards should always be kept vacant, for transfer from other wards while cleansing is going on. In fact, a thorough house-cleaning system is the great desideratum for hospitals. The paper of Dr. Baker showed careful study of vital statistics, and it is evident that the able labors of Farr, Harris, Snow and others in this direction are beginning to secure accurate classification. The paper of Dr. Hunt especially emphasized the fact that cities are an interruption of the sanitation of nature, and as such art must compensate for the evils art has introduced. The need of air circulation beneath the ground and the importance of drains for pneumatic as well as aquatic service was strongly insisted upon. The small-pox question had full ventilation at the hands of Dr. Toner of Washington, and Dr. Snow of Providence, and the distinction between epidemics and contagions was sharply drawn.

Dr. Busey, of Washington, noted some interesting facts as to the handling of vegetables and as to the laws of their decay. Turnips, for instance, show bacteria sooner than any other vegetable, and the proper condition of each vegetable and the laws of its preservation and decay are susceptible of accurate study.

The paper of Dr. Smith showed most conclusively the bearing of sanitary science upon the advance of the medical profession.

Dr. Sturgis, in a paper on syphilis, furnished a large number of statistics and made careful deductions therefrom.

Dr. Beard, in his paper on hay-fever, disputed the ground that it depended upon locality or upon infusoria. While recognizing dust-pollen, etc., as exciting causes, he claimed it as a species of catarrh or influenza which has its foundation in a nervo-bilious temperament.

The papers of Drs. Fryer and Billings gave some interesting observations as to the climate of the extreme West. Its effect on pulmonary disease was discussed on the basis of statistics, and in reference to the native population. While consumption is a rare disease, it is not true that all stages of pulmonary disease are benefited by the climate. The fact was brought to light that erysipelas occurs in the mountain regions, and amid circumstances where it is very difficult to detect zymotic origin. The evils of crowded schoolrooms was ably discussed by Dr. Bell, of Brooklyn, and the important point insisted upon that we are not too much to concentrate our attention upon carbonic acid as the index of foul air. There were several other papers of interest, and the whole meeting was found profitable to those in attendance. The evening addresses of Dr. Osgood, on "The Relations of Health to the Higher Culture," of Prof. Orton, on Geology in its Relation to Water-Supply, and of Gen. Vielé, on Drainage and Sewerage, commanded the full attention of large audiences, as did the excellent closing addresses of Hon. Mr. Eaton and Hon. Mr. Steiner. No time was wasted on side-issues or feasting, and both the papers and discussions are a valuable contribution to sanitary science.

Original Communications.

A BRASS RING LODGED IN THE LARYNX FOR FOUR YEARS.

REMOVAL BY SUBHYOIDEAN LARYNGOTOMY—CURE.

By GEORGE M. LEFFERTS, M.D.,

SURGEON TO THE NEW YORK EYE AND EAR INFIRMARY, THE DEMILT DISPENSARY (THROAT DEPARTMENTS); LATE CHIEF OF CLINIC TO PROF. STOERK, IN THE IMPERIAL UNIVERSITY OF VIENNA.

THE following contribution to the surgical therapeutics of the air-passages is made in the belief that the history of the case detailed possesses a sufficient number of unusual points to render it of general interest. These features are the remarkable and unique method of lodgment of the foreign body, the comparatively slight disturbance—both local and constitutional—that it has until lately caused, notwithstanding the length of time that it had remained within the larynx and in its peculiar location, and its very unusual nature—but one of a similar character having been reported among the very many cases on record of foreign bodies within the air-passages.

This one parallel case is reported* as occurring in the person of a young child who had inhaled a brass ring the size of a shilling. "It remained in the larynx for nineteen days, the symptoms being an occasional cough, attended by a croupy sound and a whistling noise during sleep. Tracheotomy was performed at the end of the period above specified, and the foreign body pushed upwards and seized by forceps at the opening of the larynx."

The operative procedure employed in our case for the removal of the ring is an unusual one, having been performed but five times, and, as far as I am informed, never in this country, and in the present case for the first time carried out for the removal of a *foreign body* from the larynx, although its applicability in such cases is spoken of by several of those who have written upon the subject.

The skilful use of the laryngoscope has almost entirely obviated the necessity of resort to operative measures of like character in the surgical treatment of the throat; but cases occasionally occur where, as in the present one, laryngoscopic treatment is unadvisable or impossible, and where we are compelled to employ other means for the relief of the patient than treatment *per vias naturales*.

The extra laryngeal methods of operating cannot therefore be lost sight of, but must remain now, as well as in the pre-laryngoscopic era, a valuable means of aid at our command, and any additions to our experience of them, no matter how slight that addition may be, will have a certain value.

Finally, the case affords an instructive illustration of the value of the combined methods of diagnosis by means of the stethoscope and the laryngoscope; for although the diagnosis of a foreign body within the air tract had been made in our case, and its location most accurately determined by the ear alone, still the laryngoscope rendered this diagnosis, by demonstrating the fact to the eye, an *absolute* certainty, and supplied, in addition, the details of position, form, and nature of the foreign body, and led to an intelligent appreciation of the indications for surgical treatment—important facts at which auscultatory science could only arrive by inference.

* Lancet, vol. i. 1862, p. 247.

CASE.—A. B., aged six and a half years. Four years ago (August, 1870) the child, while playing in the company of other children with an ordinary, medium-sized, brass finger-ring, broken at one point, placed it in her mouth, and a few moments later suddenly swallowed it. Urgent dyspnœa immediately followed; the child became deeply cyanotic, then unconscious, and suffocation seemed imminent, until one of the bystanders, passing her finger deep into the child's throat, felt the ring and pushed it downwards. This act was followed by immediate improvement in the respiration. The child recovered consciousness, and soon afterwards was able to move about at play.

On the physician's arrival, a short time later, various instruments were passed into the throat in order to seize the ring, but without success, and no foreign body being met with during the examination, it was supposed to have passed into the stomach, and further attempts at removal were desisted from.

Cathartics were administered and the evacuations carefully watched, but without finding the missing body.

The child's respiration is stated to have remained good during the remainder of the day of the accident; but the same night the mother noticed that it was decidedly stridulous, and says that it has since remained so. The child, however, slept quietly, and had no attacks of laryngeal spasm. Deglutition was not and has not been affected. The child, immediately after the accident, became partially aphonic, and has continued in the same condition during the subsequent period of time up to within six weeks. A short, hacking cough made its appearance a few hours after the ring was swallowed, and has persisted since that time.

Several physicians were summoned at different times during the few weeks following the accident, and occasional instrumental examinations of the throat were made. (It may be here stated that no laryngoscopic examination had been made previous to the one made by me.) Emetics, laxatives, and cough-mixtures were ordered, and the mother was assured that the presence of the ring within the air-passages was extremely doubtful. The above narration of symptoms comprises the history of the case during the following period of time—nearly four years—up to six weeks ago. Within this time there was no change in the symptoms as described, nor were any new ones noticed, except that the child gradually lost flesh and strength.

Six weeks ago the child contracted a heavy cold. The respiration immediately became seriously embarrassed. The voice was entirely lost, and laryngeal spasm occurred for the first time, principally during the night. The attacks were prolonged and severe; the child becoming relaxed and cyanotic, then gasping for breath, and tearing at the throat with both hands; but the intensity of the spasm passing off in a few seconds, deep inspirations followed, the face assumed its natural hue, and the patient again fell into a natural sleep.

Lately these spasms have increased in frequency, so that she may have from two to six during the course of one night. Any exertion or excitement during the day will increase the number and severity of the attacks at night. A fit of crying alone has often provoked serious and protracted laryngeal spasm. Although the voice has been entirely lost for the last six weeks, and all of the symptoms have pointed to a very serious interference with the function of the larynx, deglutition has not been at all affected. The child does not, nor has not, complained of any pain during the process, and has always taken, with equal facility, solid or fluid food, a curious fact, to be noted when

the location of the ring in its relation to the laryngeal parts comes to be described.

The condition of the child becoming so serious, the mother was advised by her friends to leave her home in the country and come to this city for medical advice.

She here consulted Dr. J. Lewis Smith, who upon making an auscultatory examination detected the presence of the missing foreign body within the respiratory tract.

The doctor referred the case, as one of unusual interest, to Dr. J. R. Leaming, who, after making his examination, directed the case to me, for the purpose of having a laryngoscopic examination made.

My report having been made, the child subsequently was most courteously referred to me for treatment by Dr. Smith.

At my request Dr. Leaming has kindly made me the following interesting report of the result of his auscultatory examination:

"*Auscultation of the chest: Right side front.*—Obscure evidence of obstruction somewhere in the air-passages, not brought definitely to the ear.

"*Left side front.*—Loud whistling of moderately high pitch over the region of the left bronchus, but without local point of intensity.

"*Right side posteriorly.*—Loud whistling, moderately low pitch, over the right bronchus, extending into the branches so far as to the third or fourth divisions, rising in pitch, but with no point of local intensity.

"*Left side posteriorly.* Loud whistling over the left bronchus, of moderately high pitch, extending into the branches so far as to the third and fourth divisions, rising in pitch, but without local point of intensity.

"In all other respects the respiratory sounds of the chest are normal.

"*Diagnosis.*—Obstruction not in the chest.

"*Auscultation of the Trachea.*—Loud whistling of low pitch over the trachea, but without point of local intensity; no obstruction.

"*Auscultation of Larynx.*—Loud whistling of high pitch over the larynx, with local point of intensity.

"*Diagnosis.*—Obstruction in the larynx.

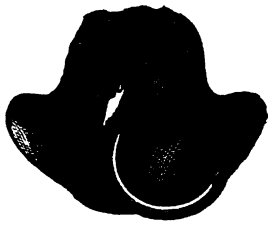
"The seat of the murmur is in the larynx, and is of high pitch. It is consonated in the trachea, bronchi, and branches, the pitch varying according to the size of the tube; consonated sounds in air-chambers assume the pitch fundamental to the chambers in which they are reformed.

"The murmur was not consonated in the true respiratory system."

The result of the laryngoscopic examination confirmed this diagnosis most fully. The mirror showed the left ary-epiglottic fold, together with the false cord of the same side, to have been the seat of old ulcerative action, and to have undergone considerable alteration in form and size from the results of inflammatory plastic deposit, and subsequent cicatricial contraction. The ary-epiglottic fold is greatly thickened, especially posteriorly, but still preserves its general outline and is distinctly recognizable. The false cord below it presents an irregular and nodulated outline, and by its protrusion forwards and inwards, diminishes the normal calibre of the larynx more than one-half, causing thereby a marked degree of stenosis. The surfaces presented to view in this part of the larynx, although they show the evidences of superficial ulceration at points extending deeply into the tissues, have fully cicatrized and present a smooth exterior.

On the right side of the larynx the parts present their normal configuration. The right vocal cord can be seen, partly obscured posteriorly by the hypertrophied left false cord, lying far below in the laryngoscopic picture, and moving freely in phonation.

The ring lies as shown in the drawing, with about one-third of its circumference hidden by the middle of the hypertrophied and nodulated false cord and ary-epiglottic fold of the left side, which lie above it. It reaches inwards at about the level of the vocal cords, until it overlies to a certain extent the right vocal cord, thus presenting a direct barrier or obstruction across the larynx, and interfering with and modifying in character the respiratory current of air.



Posteriorly it extends upwards and backwards, and, lying against the posterior pharyngeal wall, is thus elevated above and lies free from contact with the left arytenoid cartilage. About two-thirds of the ring are therefore presented to view, being entirely uncovered by the laryngeal parts, and it hangs in position in the same manner as an ear-ring is held by the lobe of the ear.

The ring has undergone but little, if any corrosive action, it is discolored at points, at others the natural metallic lustre is plainly to be seen, and it presents no irregular or eroded surface, a circumstance readily explainable when it is remembered that foreign bodies situated within the larynx are much less liable to become incrusted with various kinds of matter than when they are lodged in the bronchial tubes. In the latter case the foreign body usually becomes invested by inspissated mucus, or even by earthy substances, principally the carbonate and phosphate of lime, in small quantities.

During respiration the natural motion of the laryngeal parts is confined to the right side of the larynx, and the corresponding cord is abducted from the median line; no change, or but very slight irregular movement, being noticed upon the opposite side of the larynx.

In phonation action is again confined to the right side of the larynx, and the vocal cord approaches the median line and passes beneath the hypertrophied mass upon the opposite side. Owing to its presence, the fact of whether or no it meets its fellow cannot be demonstrated. During this process of phonation the ring rises up from its bed, leaves the posterior pharyngeal wall, and stands in an oblique direction to the vertical axis of the larynx. On the completion of the act it falls back into its former position.

The process of deglutition cannot, of course, be practically demonstrated with the mirror; but simple efforts, the mirror being held in the fauces, show that during the act the position of the ring suffers no alteration. Both fluids and solids must therefore pass, to a certain extent, through the ring to reach the œsophagus.

In deciding upon the operative procedures necessary to be undertaken for the relief of the patient by removal of the foreign body, preference was given to the extra-laryngeal to the exclusion of the intra-laryngeal methods, and for the following reasons:—

The age of the child—six and a half years—and its irritable, nervous temperament, increased certainly by the long-continued abnormal state of the respiratory passage, and the consequent constitutional disturbances, and probably influenced by the many examinations and faucial explorations that it had from time

to time undergone, rendered a perfect and satisfactory examination *utterly impossible*, owing to the child's unwillingness to submit to it. It was only after repeated examinations, and much time spent in reassuring the little patient, that the above results were able to be obtained.

The possibility, therefore, of the successful employment of the delicate operative manipulations required in the performance of any laryngoscopic operation, —manipulations demanding not only a *tolerance*, but also an active and intelligent *co-operation* on the part of the patient,—was in this case not to be expected.

Anæsthetics, valuable as they are in the other departments of surgery, render little if any service to the laryngoscopist in such cases as the one under consideration. The difficulty, not only of the examination itself, but much more so in carrying out the necessary instrumental procedures, is increased greatly, and in fact may be said to be rendered insuperable, by its employment in laryngoscopic surgery. As has been already said, intelligent co-operation on the part of the patient with the endeavors of the physician, forms an essential element in the skilful performance of any laryngeal operation. The patient being anæsthetized this co-operation is not forthcoming, and the operation, in a very large proportion of the cases where it has been employed, has entirely failed.

In addition to the reasons stated, other difficulties caused by anæsthesia employed during the performance of operations within the air tract, will suggest themselves to all surgeons, and need not be discussed here.

Then, again, the location and attachments of the foreign body were unfavorable for its successful removal "per vias naturales," without ample opportunity and time were allowed to carry out the necessary manipulations for its removal in portions (and this has been shown to be impossible). The ring was located too deeply, was covered by too large an amount of firm cicatricial tissue, and included within itself too much of the laryngeal parts to allow of its being seized and forcibly torn from its bed by means of the laryngeal forceps.

The resulting laceration would have been great, and the danger of subsequent inflammatory œdema or tumefaction—a danger intensified by the already existing state of laryngeal stenosis—would have been too serious to have been incurred when other and safer means of removal were available.

Lastly, the indications for operative interference and removal of the foreign body, which by its presence was causing dangerous laryngeal spasm, were immediate.

These considerations deterred me, therefore, from attempting the removal of the ring by the natural passages, and as the best *substitute*, the operation of "subhyoidean laryngotomy," or more properly, perhaps, "sub-hyoidean pharyngotomy," was selected.

This method of removal was especially indicated in the case under consideration; the ring being located at the superior opening of the larynx, it could be easily reached through an opening made in the thyro-hyoid membrane, and removed without difficulty or interference with the laryngeal parts proper. The operation is a much less serious one than thyrotomy, and the results in all published cases that I have been able to find, with the exception of one, have been good in its relation to life; while, of course, it presents none of the dangers of interference with the vocal function that thyrotomy does. No important structures are involved in its performance, nor can any large vessels, with care, be wounded; the most liable to this accident being the superior laryngeal artery and vein, which, however, enter the larynx so far posteriorly and behind the wing of the thyroid cartilage, that injury to them is almost impossible.

The other extra-laryngeal methods for the removal of growths or impacted foreign bodies,—"infra-thyroid laryngotomy" and "tracheotomy,"—as they are only applicable in the cases where the body to be extirpated is situated in the subglottic region, were not indicated in our case, and are therefore not considered here. The operation of "subhyoidean laryngotomy" offers so many advantages, therefore, that it is a matter of surprise that it has not oftener been performed, to the exclusion of other and much more dangerous methods which have been at times undertaken for the removal of growths, etc., situated either within the valleculæ, at the base of the tongue, on the epiglottis, the ary-epiglottic folds, or even upon the arytenoid cartilages, after the operation by the natural passages has been proved to be, from the nature of the case, unadvisable or impossible, or after attempts at their removal by the mouth have from any cause failed.

Vidal,* Malgaigne, Lewin,† Semeleder,‡ and Langenbeck recommend its performance in such cases as those indicated above, although I believe that it has never previously been done for the purpose of removing an impacted foreign body. Hyrtl § objects to the operation on anatomical grounds, and states that a view of the interior of the larynx cannot be obtained through a wound in this region, an objection which experience has proved to be erroneous.

In the present case it was deemed advisable to modify the original operations by first performing tracheotomy, and thereby insure the patient a free and plentiful supply of air during the steps of the operation—a procedure rendered doubly advisable by the condition of laryngeal stenosis existing in the case, and the liability to laryngeal spasm (as shown in the previous history), as well as the danger of subsequent inflammatory action reducing still further the calibre of a larynx already diminished more than one-half from its normal condition.

It was proposed to make the presence of the tracheal tube but temporary, and it having subserved its first purpose of protecting the patient from danger during the operation, to remove it as soon as danger from the laryngeal inflammatory process had passed away.

The operation was accordingly undertaken July 7th, 1874, as follows: The head having been thrown backwards over pillows placed beneath the neck, and the position of the cricoid cartilage having been identified, an incision some two and a half inches in length was made over it, in the median line, and extending downwards over the superior portion of the trachea. The skin and superficial fascia being rapidly dissected through, the inner borders of the sterno-thyroid muscles came into view, and after drawing them aside by means of retractors, a few touches of the knife laid bare the cricoid cartilage, and with it the isthmus of the thyroid body lying immediately below, across the trachea,—in this case being unusually large and lying high up. During this dissection several medium-sized vessels were severed, and a halt was here made until they had been secured by torsion. The isthmus was then displaced, partly by pushing it downwards and partly by tearing through its substance, a procedure which I have several times adopted and have never

* Velpeau, Médecine operat.
† Beiträge zur Laryngoscopie. Deutsche Klinik, 1862, No. 13.
‡ Die Laryngoscopie. Wien, 1863. P. 60.
§ Handbuch der topograph[illegible]hen Anatomie. Bd. I. p. 461.

experienced any trouble nor unusual hemorrhage from its laceration, contrary to what I believe to be the generally held opinion. The isthmus being partly removed in this manner, the upper rings of the trachea became plainly visible, and all active hemorrhage having ceased, a hook was placed under the lower edge of the cricoid cartilage to steady the parts.

An incision was then made in the trachea, from below upwards, commencing at about the fourth ring, and continued up to the cricoid cartilage. The tracheal dilator (Trousseau) having been introduced and the lips of the incision held apart, the canula was readily introduced and secured in position.

Spasmodic cough followed, expelling a moderate amount of clear mucus untinged with blood, but ceased after the further administration of ether through the tracheal tube.

The second step of the operation consisted in, first, identification of the position and relations of the hyoid bone, a procedure not unattended by some difficulty on account of the small size of the parts and the close proximity of the hyoid bone to the thyroid cartilage, a limitation of the field of action which renders the performance of this operation upon a child much more difficult than upon the adult.

This point having been satisfactorily ascertained, an incision three inches in length was made parallel with the lower border of the hyoid bone and one-eighth of an inch below it, transversely across the neck, and the skin, subcutaneous cellullar tissue, the superficial fascia with the internal fibres of the platisma myoides, the inner half of the sterno-hyoid and thyro-hyoid muscles being carefully divided on each side of the median line upon a director, introduced successively between the various layers, the thyro-hyoid membrane was reached and laid bare without difficulty and with very little hemorrhage, no arterial branches having been encountered. Two veins which lay across the track of the wound, immediately below the platisma, were of such a size as to render ligature advisable, and having been raised by dissection from their beds, were secured by double ligature and then severed.

The thyro-hyoid membrane being now divided by an incision of less extent than the one through the superficial parts, thus giving a funnel shape to the wound, the cushion of cellular and adipose tissue lying between the base of the epiglottis and the parts external to it, together with the laryngeal mucous membrane to either side of it, were disclosed, the latter being prolapsed outwards as soon as the tense pressure of the thyro-hyoid membrane was removed, and could be seen to be drawn inwards with each inspiration.

The most important and difficult step of the operation now follows—important as regards the danger of wounding the epiglottis, and certainly rendered more difficult by the vagueness of the description given of its mode of performance by Malgaigne and others, and the omission of the consideration of important anatomical points which must influence it.

Malgaigne says,* and his description of the operation has always been considered the classical one, and is the one which has been followed by those who have performed the operation: "After incision of the thyro-hyoid membrane and those fibres of it which go to the epiglottis, the mucous membrane is reached; seize this and divide it also; the epiglottis then presents itself."

* Manuel de Médecine opératoire. 1871.

Prat,* in describing the steps of his operation, says that he proceeded to divide the tissues, layer by layer, until he reached the thyro-hyoid membrane; after cutting this through, the epiglottis presented itself.

Follin† states that he divided the cushion of adipose and cellular tissue which lay in front of the epiglottis (after cutting through the thyro-hyoid membrane), and lastly, incised the *laryngeal mucous membrane* and opened the *cavity of the larynx*.

This stage of the operation would, according to these accounts, seem to be indeed a comparatively simple one; but I have not found it to be as described. My dissections and experimental operations upon the cadaver have shown me that after the thyro-hyoid membrane has been divided transversely, a thick layer of cellular and adipose tissue, extending usually from the hyoid bone above to the thyroid cartilage below, forming the cushion of the epiglottis, and lying between it and the parts external, presents itself; to either side of this mass mucous membrane protrudes. This membrane consists of the broad anterior portions of the ary-epiglottic folds at about the point where they join with the sides of the epiglottis—is therefore *laryngeal mucous membrane*, and an incision made through it transversely and directly inwards, or even with the point of the knife directed upwards and backwards, would open directly into the *laryngeal cavity*, not alone by cutting through the anterior extremities of both these folds, but in so doing necessarily dividing also by the transverse incision the cellular and adipose mass lying in front of the epiglottis and between them—would cut through this cartilage at about its middle, or a short distance below that point.

Follin's description of the steps of his operation illustrates this point fully, and demonstrates the danger of such an incision; for by making it he cut across the epiglottis and penetrated directly into the laryngeal cavity.

It is needless to say that this accident is to be carefully avoided. Such an opening into the cavity of the larynx would render, according to several authors, a clear view of its interior impossible, and would certainly defeat, to a great extent, the purposes and advantages of the operation.

How, then, are we to avoid section of the base of the epiglottis? By, after having reached this point in the operation, inserting a tenaculum into the cellular and adipose mass described above, and by means of it drawing the epiglottis forcibly downwards. This puts its ligamentous attachments to the hyoid bone and tongue upon the stretch, draws it away from the former, and leaves an appreciable interval of space between them through which the knife—its point directed upwards and backwards, and kept near the hyoid bone—can be readily passed, and will be found to have penetrated the mucous membrane between the base of the tongue and the epiglottis, the aim of the incision.

The epiglottis being drawn downwards in this manner, mucous membrane will still present itself laterally; but a moment's reflection will show that this is no longer laryngeal. The displacement of the epiglottis has carried downwards with it both ary-epiglottic folds, and the mucous membrane which we now have presenting is a portion of that situated between the base of the tongue and the epiglottis. The incision needs now only to be carried through it on either side, including the few ligamentous fibres

* Gazette des Hôpitaux, 1859. No. 103.
† Archives Générales de Médecine. Février, 1867.

which run from the epiglottis to the hyoid bone, and which are seen in the median line; to lay open the pharynx, and to have the epiglottis present itself uninjured to view. A digital exploration by the mouth, made previous to incision of these parts, affords an important aid in diagnosticating their relations. The size, form, and ligamentous attachments of the epiglottis, especially in its relation to the hyoid bone, vary greatly in different cases. If the index-finger of one hand, however, be introduced into the mouth, not only the tip, but also the base of the epiglottis can in the majority of cases be reached and felt, should two fingers of the other hand now be placed upon the hyoid bone, a diagnosis as to their approximative relation can be readily made, and will usually be found to be so satisfactory in its results, and will afford so much certainty to the operator during his future proceedings, that it should in no case be omitted.

In carrying out the further steps of my operation especial care was therefore given to this point, which I have endeavored to make clear in as few words as possible, and the importance of which I think merits careful attention on the part of the operator.

The parts immediately below the thyro-hyoid membrane having been exposed as described above, a tenaculum was inserted near the hyoid bone, into this thick cushion of cellular and adipose tissue, and strong traction downwards made to accomplish the purposes already mentioned. To insure still further certainty, a small incision was made into the left lateral projecting fold of mucous membrane, and a director was passed inwards, and then directly across, coming out at a corresponding point upon the opposite side of the wound, and through the projecting mucous membrane at that point. It should therefore lie in the groove or furrow between the base of the tongue and the epiglottis, and a digital exploration by the mouth confirmed the point.

Nothing now remained in order to complete the operation but to incise the tissues lying over the director. This was done, the direction of the knife being upwards and backwards, and the pharynx was opened.

The epiglottis immediately came into view, not, however, being pushed into the wound, as stated by Malgaigne, and was seized and drawn outwards through the incision. A perfect and most satisfactory view was now afforded of the superior laryngeal parts, and the ring was seen lying in the position as previously demonstrated by the laryngoscope.

In order to remove it with as little laceration of tissue as possible, my intention was to have cut through it at two points by means of a cutting forceps, and, having removed the upper fragment, to displace and bring away the remaining and smaller ones by drawing them out through the tissues in which they lay imbedded.

On attempting this, however, and making the firm pressure on the forceps necessary to cut through so thick a substance, the ring was felt to give and rotate slightly. This fact being ascertained, a moment's manipulation with a small forceps resulted in disentangling it from its attachments, and in bringing it safely out through the external wound.

An examination of the ring, in order to ascertain at what point it had been cut through, disclosed the fact that a piece was wanting. An examination of the tissues failing to find this missing portion, and the edges showing no evidences of having been freshly severed, but one conclusion remained, that the whole ring had been removed; that the mother of the child had been mistaken in her description, and that the missing body was not a finger ring, broken at one point, with the ends bent together so as to overlap each other and fit the finger of the child, as she had stated, but the ring of a watch or locket, thicker, heavier, incomplete, and with bevelled extremities; and this supposition was later confirmed by a jeweller, to whom it was submitted for examination.

Its singular mode of lodgment could now be more readily accounted for, the character of the foreign body giving the key to the explanation. My original view was, that the ring had lodged and become impacted in the left pyriform sinus at the time of the accident, and that it had from thence sunk inwards and downwards, ulceration having occurred as a result of pressure, and granulations formed over it, as the process proceeded, and subsequently cicatrizing; this action having continued until the level of e vocal cord had been reached, and that further ulceration had been delayed by its dense ligamentous character. The only difficulty was in reconciling the facts with the theory. A body of such a size and character as the one in the present case, lodged as I supposed it to have been lodged, would, I think, in a vast majority of cases, have been coughed up or dislodged during the efforts at vomiting, etc., or most certainly have been removed by instrumental interference at the time of the accident, or at least its presence recognized.

After having seen the ring, however, I think that it is reasonable to suppose that having lodged partly across the superior laryngeal opening at the time of the accident, in pushing it downwards, as was done, the left ary-epiglottic fold was caught between the lips of the ring and the latter then firmly crowded downwards, tearing its way into its position, a position which would render all attempts of nature to dislodge it unavailing, and would also cause a diagnosis as to its presence to be much more difficult, unless the laryngoscope had been used.

The corroded and discolored portion of the ring, as shown in the drawing, demonstrates that it must have subsequently changed its position somewhat, and a still firmer hold on the tissues afforded by one of the free extremities having ulcerated its way inwards through and beneath the ary-epiglottic fold and false cord. This same change hid still further the ends of the incomplete ring, and allowed only an unbroken and rounded surface to appear to the eye, representing a complete circle.

In closing the wound I modified somewhat the methods of former operators, and I think with good result. The general practice has been simply to introduce three or four deep sutures, and then to keep the parts in apposition and at rest by flexing the head upon the chest. The method which was carried out in my case was: First, to unite carefully the divided edges of the *mucous membrane* by means of fine thread sutures, the knots being tied so as to lie inwards.

No difficulty was experienced in its accomplishment, and the good result was made manifest by the fact that at no time subsequently, during the process of healing, was there escape of air through the external wound, nor discharge of fluids during deglutition, even though the latter process was at times, by order, forcibly conducted.

This having been done, deep wire sutures, three in number, were then introduced to bring together all of the deeper tissues, the ends being brought out through the external wound, and finally the latter closed by means of the interrupted suture.

The subsequent history of the case was most satisfactory and rapid in its progress towards a cure, and may be summed up in a few words:

On the second day after the operation it was found that upon closing the tracheal tube respiration could not be carried on through the larynx—a condition which I had anticipated—on account of the inflammatory swelling increasing the original amount of laryngeal stenosis, and to provide against which I had opened the trachea.

A laryngoscopic examination showed the cause of this condition to be due to the swelling of the epiglottis and of the tissues lying between it and the base of the tongue, the latter pressing the epiglottis backwards until it covered more than one-half of the superior opening of the larynx. The larynx itself, with the exception of the left ary-epiglottic fold, which was somewhat swollen and hyperæmic, was, as far as could be seen, free from any inflammatory action. Deglutition was easy, and unaccompanied by any pain.

On the tenth day the inner tube being closed by the finger, respiration was readily carried on, and from this time until its removal on the thirteenth day, it was worn closed by means of a small cork, the latter being removed during the night and replaced in the morning. The patient's progress towards recovery during this time was rapid, the greater part of the wounds had closed by first intention, and the remaining portions were granulating satisfactorily.

The common complication after tracheotomy, pneumonia, did not here occur, a circumstance that I attribute in great measure to the fact that no blood was allowed to enter the trachea and be drawn down into the bronchi, to remain a local cause of irritation, at the time of the operation, and not to any measures of special precaution against it that were adopted by me. Indeed, I have found that cases in which the air-passages have been opened do not develop pneumonia any more certainly or readily when they are treated without special reference to their surroundings, only using ordinary precautions against exposure, than when extraordinary measures—the high temperature, moist atmosphere, closed room, etc.—are carried out.

After removal of the tube, on the thirteenth day, the patient's respiration was found to be free, easy, and to have lost its stridulous character. The voice had been gradually assuming force and clearness during the last few days, and the tube being now permanently removed, was heard to be clear and distinct, but with a slight intonation, nasal in character.

A laryngoscopic examination made at this time shows that the hypertrophied and thickened portions of the larynx, especially the left ary-epiglottic fold and false cord, have undergone a rapid process of contraction, and at present, although still of a nodulated and irregular outline, approach very nearly their normal configuration and size. This change allows the left true cord, formerly invisible, to be seen, and it is found to present a normal appearance anteriorly and posteriorly, but on its middle superior surface to be covered by exuberant granulation tissue.

Its muscular action in phonation is deficient, and it does not reach the median line during the act; the right cord, however, in its excursion, passes beyond that point, and meets its fellow in close approximation. Subsequent examinations showed that this condition was improving, and approaching the normal performance of the act. The location of the line of incision through the mucous membrane at the base of the tongue could be seen fully cicatrized; the median glosso-epiglottic fold and the lingual sinuses have disappeared; but the pharyngo-epiglottic folds are intact.

On the twenty-first day, the external wounds having closed, and the voice having steadily improved in force and character since the removal of the tube, the patient was discharged cured.

In concluding this clinical consideration of the operation a condensed report of the other cases in which the same operation has been carried out may not be without interest.

Considerable research through the surgical literature has resulted in finding the reports of but five cases (one of these having been complicated by the performance of thyrotomy subsequently). That my search has not been exhaustive, I am well aware, and shall be glad if any attention that I may have called to the subject will result in placing heretofore unreported cases, especially in this country, upon record, or in bringing to light any which may have escaped notice.

The cases are briefly as follows:—

I. In 1859 Prat* performed the operation for the removal of a tumor situated upon the left side of the epiglottis, after attempts at its removal by the mouth had failed. The symptoms of extreme dysphagia, and some dyspnœa which its presence had caused, disappeared after its removal, and the patient died some time later of phthisis. On the autopsy no vestiges of the growth could be found.

II. In 1862 Langenbeck† undertook the operation for the relief of a patient who had previously had a large pharyngeal tumor removed by means of the galvano-cautery, the tumor recurring and causing excessive dyspnœa. It was again extirpated by the operation of supra-thyroid laryngotomy. The operation was a severe one, the hemorrhage profuse, and the patient died on the second day after.

III. Follin‡ operated, in 1863, for the removal of a number of myxomatous growths situated in the posterior commissure of the larynx and upon the arytenoid cartilages, laryngoscopic treatment having failed on account of the extreme irritability of the pharyngeal parts. The patient made a speedy and complete recovery.

IV. In 1863 Debron§ performed the operation in order to effect the removal of a laryngeal tumor which he supposed that he could reach through an incision in the thyro-hyoid membrane. It was, however, found, during the operation, that the growth was situated partly within the right ventricle of the larynx, and that it extended downwards below the vocal cord; and thyrotomy was done in order to permit of its complete extirpation. The patient died on the seventh day after the operation, from bronchitis.

V. Langenbeck's§ second case, which occurred in 1869, was entirely successful. The tumor, the size of a pigeon's egg—for the removal of which it was performed—was myxomatous in character, and was situated upon the left ary-epiglottic fold, reaching backwards to the left side of the pharynx, and involving the left arytenoid cartilage.

333 West 22d Street.

---

* Gazette des Hôpitaux, 1859, No. 103.
† Allgemeine Medicinische Zeitung, 1870, No. 8.
‡ Archives Générales de Médecine, Février, 1867. Mackenzie on Laryngeal Growths, p. 99.
§ Allgemeine Medicinische Zeitung, 1870, No. 9. Cohen, Diseases of Throat, p. 452.
‖ Allgemeine Medicinische Zeitung, 1870, Nos. 9, 10.

ON SOME OF THE USES OF GALVANIC AND FARADIC BATHS.

By GEORGE M. SCHWEIG, M.D.,
NEW YORK.

I DEEM it the duty of every physician whom circumstances afford the opportunity of making observations that possess physiological or therapeutic value, to lay before his colleagues not only the facts as they have presented themselves to him, but also his views relative to these, in order that from a multitude of opinions may be culled, in the course of time, the truths which are destined to become scientific facts and principles. This seems to me peculiarly requisite where the physiological and therapeutic effects of a new or recent method are involved, to bring which to its proper worth and standard is as desirable in the interests of science as in those of humanity.

I have had for the last year, and still continue to have, occasion daily to supervise the administration of electrical baths (both galvanic and faradic), and I now propose to lay before the profession the outlines of some cases illustrative of their therapeutic value. These cases are by no means especially interesting in themselves. Even if I had cited such, I could not in this connection have afforded them their merited space. If, therefore, my description of cases should appear to some incomplete and superficial, I beg to say to these that I have not made even an attempt to individualize any case, but have cited each one only to serve as an illustration of the effects of a remedy.

I must for the present refrain from a consideration of the physiological effects of the baths, my experience being as yet too limited to serve as a basis for the grounding of physiological facts.

CASE I. *Rheumatism.*—Mr. F., from the practice of Dr. Alexander Murray, about thirty-two years of age, of robust appearance, large, vigorous frame, had an attack of acute inflammatory rheumatism in the spring of 1873, from which he recovered in a short time. In the winter of 1874 he experienced a second attack, for which he had had treatment for about two months prior to coming under Dr. M.'s care. After treating him by other methods, including local galvanic applications to the affected parts (joints as well as muscles were involved), for two weeks, Dr. M. sent patient to take electrical baths. On May 25th Mr. F. was brought in a carriage. He was not able to walk, and had to be assisted up the steps by two attendants. His arms were in a scarcely better condition, the wrist-joints especially being exceedingly painful and tender. The first and second baths, administered respectively on May 25th and 29th, did not effect much change in his condition. The third bath was taken on May 30th, with the happiest results. On June 1st patient was able to come for his fourth bath alone and on foot, and thenceforth his recovery was very rapid. The seventh bath, taken June 7th, left him perfectly cured, not a trace of the disease remaining. He has been free from rheumatism since. In the first three baths the galvanic current was employed exclusively, the muscles and tendons being in too tender a condition to bear the contractions induced by strong faradic currents. In the subsequent baths both currents were used, according to indications.

CASE II. *Constipation.*—Emil Miller, a bright child two years of age, was brought July 7th, 1874. He had suffered from obstinate constipation almost from his birth. Had been under the care of several physicians, but had never received any benefit from treatment. Even with the aid of powerful cathartics, given in doses suitable for an adult rather than a child, defecation took place only once in every three or four days, and was so exceedingly painful as to elicit cries of pain from the child, who had to be forced to the chamber on every one of these occasions. The fæces were always hard and lumpy, and lighter in color than normal. A digital examination per rectum revealed considerable flaccidity. My diagnosis was, *paresis of the muscularis of the intestine.* I ordered faradic baths. I preferred these to local faradization for several reasons, to elucidate which would occupy too much space here. On July 12th the first bath was administered, and I must confess that the result was a perfect surprise to me. True, I had expected a cure to take place; but I looked for gradual improvement, and was not prepared for a result such as was here obtained. *From the time the first bath was taken, defecation took place regularly once a day, without pain; the faces became perfectly normal in color and consistency, and the boy has to the present day defecated regularly and normally in every respect.* To insure permanency, however, the baths were at first continued about twice a week, then once a week, but have now been discontinued for some time. No other therapeutic measures, either internal or external, were resorted to in this case, neither was there any change made in the diet of the child.

CASE III. *Mercurial Stomatitis.*—Mr. S., about thirty-five years of age, came to me for treatment in the fall of 1872. He then had indurated chancre, two buboes, and syphilitic sore throat. He had had the chancre for six weeks before applying to me, but was, as he said, ashamed to consult a physician. Before medication had had time to make any impression on his system, roseola appeared. The syphilis was very obstinate in this patient, compelling me to keep him under the influence of mercury for a long time. In October, 1873, the patient presented himself to me with a very aggravated mercurial stomatitis. The usual remedies, both internal and local, made little or no impression on the affection. On November 11th, I advised patient to discontinue all other measures, and try a course of galvanic baths. He took his first bath on the same day. This was repeated every other day until six baths had been taken, when all symptoms of the disease had disappeared. The descending galvanic current was used throughout.

CASE IV. *Locomotor Ataxia.*—Mr. W.—— aet. forty-eight, came to consult me January 12th, 1874. He had then felt the symptoms of locomotor ataxia for about six years. Had been unable for several years to walk without the aid of a cane. When walking he dragged his right leg along in a semicircle, and was able to accomplish very short distances only. There were almost complete anæsthesia and great paresis of the bladder. The same conditions were observable in regard to the bowels. Anæsthesia of both lower extremities existed, complete in every respect in the right leg, almost so in the left. Dyspepsia and general debility and emaciation accompanied the disease. Treatment was begun on January 15th. I prescribed phosphorus and cod-liver oil, and passed a strong galvanic current through the spine for probably ten minutes. January 16th, a galvanic bath was administered. Towards the close of the bath (which occupied twenty minutes) patient thought he felt some sensation in his legs. The baths were taken every two or three days, alternating with strong galvanizations of the spine. While taking his second bath, patient remarked that "his right leg felt warm for the first time in six years." The treatment as described was continued for about six weeks, during the latter part of which the local applications were gradually diminished in frequency, the baths being con-

tinued regularly. Medication was discontinued about this time. About the middle of March Mr. W. was enabled to resume his occupation (paymaster's assistant on Erie Railway). His improvement had been rapid and steady. All the symptoms gradually disappeared, and in the beginning of April the patient was, with the exception of some feebleness consequent on his protracted illness, as well as ever. He continues so to the present day. He still takes two or three baths a month, but has had no other treatment since May. He walks freely without a cane, and talks jocosely of running foot-races. All functions are performed normally.

Although in this case the baths were not employed exclusively, yet they predominated in the treatment; and if the judgment of the patient, a very intelligent gentleman, is to be relied on, a large share of the success is due to the baths.

CASE V. *Rheumatism.*—Mr. B—y, aet. twenty-two, came for treatment on August 27th, 1874. Had subacute rheumatism, with considerable swelling of ankle-joints. The acute attack dated back six weeks. Locomotion was very painful, and could be accomplished only with the aid of a cane. A galvanic bath on the 27th, and one on the 28th of August were sufficient to remove both swelling and pain, enabling the patient to resume his avocation.

CASE VI. *Mercurio-Syphilitic Cachexia.*—Mr. L., aet. twenty-seven, had primary syphilis about four years ago. Subsequently had inveterate constitutional symptoms, for which he was under medical treatment both here and in Europe. When he had sojourned in the latter country some time, he was pronounced cured by his physicians. He married, and returned to this country in the fall of 1872. A few weeks after his return he fell into a gradual decline, which confined him to the house—and part of the time to bed—for eight months, during the latter portion of which he had discontinued all medical treatment. It was with difficulty that, assisted by his wife, he managed to reach my office. I found him terribly enfeebled; greatly emaciated; sallow complexion. He was much annoyed by rheumatic pains, which I considered specific. His condition was so exceedingly low that I decided to postpone all medication until he should be stronger. I ordered galvano-faradic baths, *i.e.*, the galvanic current in the bath as an eliminative, the faradic as a tonic. The first bath was taken on November 20th, 1873. For one month he took the baths, and nothing else. He was then so much stronger that I felt justified in instituting a mild specific course of treatment, the baths being continued as theretofore. At the end of two months the patient was nearly as strong as ever, was able to resume his occupation, and had gained twenty-seven pounds in weight.

CASE VII. *Chorea.*—Hugh O—l, aet. twelve, from the practice of Dr. J. O. Farrington; one of the severest cases of chorea I have ever seen; had been afflicted four years. Was sent February 5th to take electrical baths. Between that date and March 23d, took seventeen baths, steadily improving. Internal medication was attended to by Dr. F. The boy made a complete recovery.

CASE VIII. *Impotency.*—Mr. F., from the practice of Dr. Caro, a robust gentleman, aet. thirty-six, full of muscular vigor. Had had syphilis, the symptoms of which had disappeared under Dr. C.'s treatment. For two years the power of erection, as well as sexual appetite, had become extinct, if we except an occasional imperfect spontaneous erection on waking up in the morning, and even this was of rare occurrence. Ordinary medication proving inadequate, Dr. C. sent patient to take electrical baths. From March 7th to July 16th Mr. F. used the baths, averaging about two weekly. He was then, and still remains, perfectly restored.

CASE IX. *Hysteria.*—Mrs. A., from the practice of Dr. Kremer, aet. 28. married, sterile, was sent by Dr. K. to take baths on June 12th, 1874. Intense pruritus, transient flushing and heat of the entire surface, with pricking sensations and headache, were the more prominent symptoms. Six galvano-faradic baths effected a complete and permanent cure.

CASE X. *Specific Synovitis of Knee-joint, with considerable Effusion in and around Joint.*—Mr. C., from the practice of Dr. Sheppard, æt. about 35. First saw patient at his house on Nov. 9th, 1873, in consultation with Dr. S. and Dr. Hutchinson, of Providence, R. I. Had been on mercury and iodide of potassium for a long time. When I first saw him, he had been incapacitated from work for about a year. Had been unable to leave the house for three months. The affected joint was very much enlarged, with little or no motility, the condition being practically the same as true anchylosis. It was decided to substitute tonics for the specific treatment, and to administer galvanic baths. On Nov. 11th the first bath was administered; another on the 15th, and a third on the 19th. Considerable improvement in motility was then apparent. Two more baths, taken respectively on the 22d and 29th, effected some reduction in the size of the knee. The baths were continued to January 3d, 1874, when the effusion had become almost entirely absorbed, and the joint perfectly mobile. The patient then had been for some time taking daily walks, unassisted. He now (Jan. 3d) walks without any difficulty, has regained his normal vigor, and is practically well.

CASE XI. *General Neurasthenia of a Hysteric Type.*—Mrs. E., from the practice of Dr. Krehbiel, æt. about 28, married, of an exceedingly nervous temperament, had suffered from great nervous irritability and prostration since her last confinement (about a year previous). Was sent by her physician to take galvanic baths, April 21st, 1874. Cases of this kind are too familiar to every physician to render a detailed description of the symptoms desirable. Six galvano-faradic baths restored her to perfect health.

CASE XII. *Sub-hemiplegia from Cerebral Hemorrhage.*—Mrs. S., æt. 30, married, from the practice of Dr. Krehbiel, was sent by Dr. K. to take baths July 3d, 1874. It was a routine case, differing in no respect from what is ordinarily observed as a sequence of cerebral hemorrhage. Six baths, taken at intervals of two and three days, restored almost entirely the muscular power of the affected side.

I have taken the above twelve cases at random from a large number of which I have notes. I have not included among them any case of neurosis of the sympathetic, although I have had occasion to observe and to treat, by electrical baths and otherwise, a large number of affections of the sympathetic system, with very satisfactory results. I have purposely omitted these cases, because I felt that I could not do them justice in this connection. They possess sufficient pathological interest to entitle them to especial individual consideration, and for this I reserve them. I will merely state that I have met with affections of the sympathetic much more frequently than I could have been led to anticipate from any books or statistics on the subject. I will state here also, that in all forms of *agrypnia* I have found electrical baths superior to any hypnotic of the materia medica.

A word on the mode of action of electrical baths. I have been asked repeatedly by physicians, in what

respect these baths differ from "general electrization"—galvanization or faradization, as may be the case. I have never had any difficulty in convincing any one who asked me this question, not only that there is a vast difference between electrical baths, *properly administered*, and general electrization, but that *electrical baths are the only real general electrization*, what has been known under that name being neither more nor less than *alternate local electrization*. A moment's reflection will make it apparent that general electrization, as expressive of electrical baths, and alternate local electrization, as expressive of methods advanced under the title of "general faradization," etc., must differ vastly in their effects. A process by which the galvanic current is made to impinge simultaneously on *all* the peripheral endings of nerves, must have reflex effects that can never be obtained from a like influence brought to bear within the domain of a single nerve only, or even several. Again, where every organ in the body (excepting of course the head and face) is traversed at one and the same time by the galvanic current, an alterative effect is obtained that is unapproached by any other remedy or method that I know of. By the use of the faradic current in the baths, in place of single muscles, or at best a group of muscles, being affected, as is the case in local faradization, all or nearly all the muscles of the body can be brought into action at one and the same time, or the action of the current can be limited to certain of the extremities, the entire abdomen, etc., *ad libitum*. It is scarcely necessary for me to adduce further facts in order to show that the two procedures are anything but identical. No one can be more appreciative than myself of the therapeutic value of the methods the *appellation* of which I object to, or more ready to concede the advantages they possess. But to call "general" that which is "local," is an etymological incongruity which is the more to be deprecated when permitted to creep into the nomenclature of a science where exactitude is one of the first desiderata.

160 Second Avenue, New York.

A CASE OF PERITYPHLITIS—OPERATION—RECOVERY.

By CHAS. KELSEY, M.D.,

NEW YORK.

Boy, æt. 11. When first seen the patient and his mother together gave the following history:

July 5, 1874.—First complained of pain in abdomen, which had never since entirely left him. With the first attack of pain there was some diarrhœa, lasting a couple of days, followed by constipation for three or four days. These alternations continued for two weeks, during which time there was also loss of appetite, and a marked desire on the part of patient to lie on his back and keep still.

At the end of two weeks a tumor was first noticed low down in right side, with great tenderness on pressure; two days later, and twelve days before operation, he took to his bed, and remained four days. Then he went for a ride, but returned in great pain, and had not since been up.

During the last week in July the tumor increased in size, tenderness, and pain; the bowels were generally constipated; there was some fever, and complete loss of appetite.

Aug. 1*st*.—Slight chill; also same day three large voluntary passages from bowels, the first of which was normal, the second containing blood and mucus.

Up to Aug. 1st the pain and constitutional disturbance steadily increased, as did the size of tumor, and by this time the loss of flesh was very noticeable.

Aug. 4*th*.—Boy first seen by Dr. Zemanski, of St. Luke's Hospital. Temperature 101.5. Pain so great as to forbid examination of tumor, which was visible to eye. The diagnosis of perityphlitis was made by him, and arrangements made for an operation next morning. On account of his duties elsewhere, he then kindly transferred the case to me.

Aug. 5*th*.—On the time of my first visit, the boy was easier, but gave history of a very restless night. Temperature 100.2. Pallor and emaciation marked.

Physical examination revealed a tumor located in the right iliac fossa, bounded below by Poupart's ligament, with its upper edge, which could be distinctly felt with fingers, extending half-way to umbilicus, dulness over tumor, great pain on pressure, no fluctuation, no redness of surface. Thigh was flexed on abdomen for ease, but could be extended at will.

Operation, assisted by Drs. Zemanski and W. M. Kemp.

Incision four inches long, made parallel with, and one inch above, Poupart's ligament, and layers of abdominal wall cut through on director. After reaching fibres of internal oblique, the tissues were so matted together by inflammation as to make their separation impossible; but at both ends of the cut the dissection was carried down till the fascia transversalis was exposed, and then the mass of tissue in the middle was divided down to what seemed about the same level.

An exploring needle, introduced at this point, was followed by a free flow of blood, but no pus. This exploratory puncture was repeated three times with a small trocar and canula at different points over the tumor, twice in the line of incision, once nearer umbilicus; but each time it gave the impression of entering a solid mass, and a little blood was the only result. The operation was carried no farther; the fascia transversalis was not divided. The wound was united at the ends, and poulticed.

Next day.—Patient comfortable. No pain. Temperature 99°. Pulse 102°.

August 10*th*.—Fifth day after operation, the abscess burst through wound and gave exit to several ounces of fetid pus.

September 10*th*.—Patient entirely well—wound closed.

The doubtful point in the diagnosis of this case is known to me; still, I prefer to name it perityphlitis, and then leave each man to decide for himself. I am inclined to doubt the pressure of a foreign body in the appendix, but know of no way of deciding even this with certainty.

The case appears to me to be one of the class in which an abscess in this region follows some ulcerative process, either in the caput coli or its appendix.

New Italian Medical Journals.—Two new medical journals have appeared in Italy—*La Revista Calabrese di Medicina, Chirurgia, e Pharmacia*, edited by Dr. Placido, of Reggio, and *La Sferza*, a popular journal of hygiene and education, edited by Drs. Temistocle and Ulisse Santopadre.

Dr. J. Marion Sims.—At the annual meeting of the State Woman's Hospital, held on the 19th inst., Dr. J. Marion Sims resigned his position as one of the attending surgeons.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, Nov. 11, 1874.

DR. H. KNAPP, PRESIDENT, in the Chair.

CANCER OF LIVER.

DR. FINNELL presented a specimen of cancer of the liver, removed from an unmarried female aged 40 years. For three years previous to her death she suffered from gastric symptoms, which were recognized as belonging to cancer of the pyloric orifice of the stomach. There were, however, no symptoms which pointed to any disease of the liver.

At the autopsy, the liver was so completely infiltrated with cancerous material that hardly any healthy structure was to be seen. The gall-bladder was entirely free, and the pyloric orifice, besides being the seat of cancerous disease, had attached to its outer surface a closed sac, resembling in gross appearances a small ovarian cyst, and containing a chocolate-colored fluid.

The specimen was, on motion, referred to the Committee on Microscopy.

MORBUS COXARIUS.

DR. SAYRE presented a specimen removed by operation from a child aged 21 months, to whom he was called in consultation by Dr. Husted The patient had a large abscess of the left hip, which Dr. Husted had aspirated three weeks before. About three ounces of pus was discharged by that means, and afterwards an incision was made giving a freer exit to the pus. The mother was a feeble woman, and as the child depended entirely upon her for nourishment, it became very much emaciated. The affected limb was extremely œdematous, and presented a strange contrast with the rest of the body.

Three months ago the little patient suffered from double pneumonia, from which it recovered. While convalescing, and being quite feeble, it attemped to climb upon a chair which was upon a wet hearth, when it slipped and the left leg became strongly abducted, probably producing at the time diastasis of the head of the femur. Some weeks after this occurrence Dr. Husted was called to treat an inflamed gland in the left groin. A few months after, an abscess formed in the neighborhood. The incision for its evacuation was made upon the outer and anterior portion of the thigh, and the discharge after that operation was satisfactorily profuse. Dr. Sayre enlarged the opening and passed his finger down into the joint. The end of the femur was found to be eroded. The entire limb was then very carefully rubbed for an hour or two, with the idea of reducing the swelling, and then a bandage was applied from the toes to the groin.

DR. SAYRE saw the patient at the end of a week after this, and in the meantime, having been fed upon nutritious diet, was in a condition to bear an operation. With the assistance of Dr. Husted chloroform was administered. The incision was increased upwards, and passing the finger down into the wound bare bone was reached. This bone was removed *in situ* by means of a metacarpal saw, no risk being run in tearing away the periosteum by forced luxation. The part exsected was from the inner portion of the femur, was wedge-shaped, and entirely denuded of periosteum. The head of the femur was almost destroyed, and its remains were picked out of the wound.

The opening having been made upon the anterior portion of the thigh, in a position unfavorable for drainage, a counter-opening was made posteriorly and a tent introduced. By last accounts the patient was doing well. Dr. Sayre remarked that this was the youngest case upon which he had operated, and altogether it was the most interesting and remarkable one.

Dr. Sayre presented a second specimen of morbus coxarius, also removed by exsection. The patient was a child aged 7 years, who was brought from Otsego county. Three years ago he fell from a pile of lumber, injuring the left hip. This injury was followed by inflammation, which continued through the different stages of morbus coxarius, until destruction of the joint was reached. The resulting emaciation was extreme, and the deformity was remarkable. When seated in a chair the diseased limb was so completely flexed that the knee was brought over nearly to the opposite side of the abdomen. There were five or six sinuses in the neighborhood of the joint which were connected with dead bone.

The operation for exsection was performed on the 9th of October, before the class of the Bellevue Hospital Medical College. The head and neck of the femur were entirely destroyed. The upper portion of the bone being diseased, the section was made as low as an inch below the trochanter minor. The acetabulum was perforated, and contained some loose spicula of bone. The internal periosteum was fortunately *intact*. After the operation the patient was dressed in wire breeches.

Dr. S. remarked that this was his fiftieth case of exsection of the femur for morbus coxarius, and the result of it was the most gratifying, the child being able to walk at the end of four weeks and the shortning being less than half an inch.

SCISSORS SWALLOWED BY INSANE PATIENT AND ESCAPING THROUGH THE ABDOMINAL WALLS.

DR. SANDS presented a broken scissors which had been swallowed by an insane woman, and which had found its way through the abdominal walls. The following was a history of the case, as furnished by Dr. Farrells, of Nova Scotia, the attending physician.

"I was called, September 15th, by Dr. Fraser, the Assistant Physician of the Nova Scotia Hospital for the Insane, who had charge of the Hospital in the absence of Dr. De Wolfe, the Medical Superintendent, to see Bridget Millar, æt. 51 years, one of the inmates of the Hospital.

"The case gave the following history: Her mania has been suicidal since her admission, and she states that she has frequently swallowed various articles to destroy her life, such as needles, thimbles, and other things that she found about the wards; at one time she says she swallowed the stopper of a bath-tub, with the chain attached. Some of these she says she has passed per rectum, and others still remain within her body; she says she passed the stopper and chain soon after she swallowed it.

"A few days before I saw her, she asked Dr. Fraser to examine her side, where she complained of considerable pain, stating at the same time that about two months before she had swallowed a large pair of scissors, after breaking off one of the bows or handles. She was not believed at first, as she was constantly making such statements, without giving any symptoms; her bowels acted well, and she took her food like the rest of the patients.

"On examination of the seat of pain, the Dr. discovered a hard, circumscribed, painful swelling, about two and a half inches above the umbilicus, and three quarters of an inch to the right of the median line. She was ordered to bed, and a poultice applied. The next day a very hard spot was perceptible in the middle of the swelling, and soon a point of ulceration in the abdominal wall, and lit was evident that a hard, pointed body, which could now be felt, was pushing its way through. The opening in the wall of the abdomen enlarged somewhat by ulceration, and the foreign body could be grasped and lifted out a little, and it was found to be the point of a pair of scissors closed. Her general condition showed but little effect from the changes going on in the intestines; pulse good, appetite good, bowels acting every day, stools very black.

"On consultation it was decided to let nature continue her efforts to get rid of the foreign body for the present. During the two following days her condition remained the same, the opening enlarged a little and now discharged the contents of the bowel, stained with bile and without offensive odor. As the opening enlarged, the foreign body could be drawn out about two inches and returned, without any ill effeet, and it was determined to dilate the opening with sponge-tents. The first sponge-tent acted very well; after the second one, the scissors were slowly and gently withdrawnuntil the screw between the two blades was reached, this was forcibly broken, and the blade from which the handle had been broken was easily withdrawn. During the process of dilatation she had a chill followed by considerable fever and constitutional irritation, and it was necessary to stop the treatment for two days. The next day after the part of the scissors was withdrawn, a large needle came through the opening. When the fever subsided, we found that the sponge only dilated the external opening, and the handle of the remaining blade was held at the junction of intestine and the internal surface of the abdominal wall. Two sea-tangle tents were now used, passed well into the intestine; they dilated the internal opening well in about fourteen hours, and with very little force the remaining blade was withdrawn. In twelve hours the opening had closed considerably, looked healthy, little discharge from intestines. Two days after the operation the opening had healed. The patient is now (October 10th) as well as usual.

"The arms of the patient were held fast by part of a strait-jacket while the foreign body was coming through the abdominal wall."

Dr. Sands was of the opinion that the foreign body had probably made its way through the stomach and the abdominal walls covering it, rather than through any other portion of the intestinal tract.

Dr. Sands presented a second specimen, which he had removed by operation a few hours before the meeting. The patient was admitted to the Roosevelt Hospital, having been sent to Dr. S. by Dr. Knapp. It appears that the man had applied to Dr. Knapp on account of paralysis of the orbicularis muscle of the right eye, when Dr. K. discovered that the paralysis was due to the presence of a tumor in the parotid region. It was also observed that the paralysis was not confined to the orbicularis muscle, but involved the whole of that side of the face.

The patient was sixty-three years old, and the tumor had existed for thirty-one years. Its growth had been very slow until two years ago, when it increased in size more rapidly, and about the same time the symptoms of paralysis first made their appearance. On examination the tumor was found to occupy the right parotid region, elevating the lobule of the ear, extending forward over nearly the whole extent of the masseter muscle, and downwards upon the sterno-cleido-mastoid muscle, to which latter it proved, on examination, to be firmly adherent. It also passed in to a considerable depth behind the angle of the jaw. The skin covering of the tumor was freely movable, except on its most prominent portion, while the greater portion of its base was firmly adherent.

Enucleation of the tumor was out of the question, and after the removal of the larger portion of the mass the remainder had to be taken away piecemeal by a tedious dissection. There was no hemorrhage to speak of, and no large vessel was divided in the operation. The tumor was examined microscopically by Drs. Knapp and Heintzmann, and although the examination was a cursory one, it was discovered that the growth was mainly scirrhous in character, some portions being softened by a myxomatous process.

Dr. Sands, in connection with this specimen, exhibited some photographs of tumors removed by him from this locality, and also one large fibroma, successfully operated upon by Dr. Parker.

TUMOR OF BRAIN.

Dr. Janeway presented an interesting specimen of tumor of the brain, with the following history:—

Hermann G., æt. thirty years, married, was admitted to Bellevue Hospital, September 26th, 1874. His father died of phthisis, but no other known disease capable of possible transmission existed. He was healthy until date of present illness, with the exception of a soft chancre. Five months before admission he complained of weakness in the small of the back, then in the left leg, and about a month later in the left arm. During this time he would have an ache in the posterior portion of the head, which would last about two days, and would occur about once in two or three weeks. He was able to walk with a stick till the date of admission. Dizziness was present most of the time, and on account of this he sometimes fell. There was inability to retain urine previous to admission.

Patient, when admitted, was a pretty well-nourished man. His mental faculties were retained, though considerably impaired. He answered questions but slowly, but sometimes forgot the word he wished to use, though he recollects most words, and the forgotten word he could utter when told.

The eyesight was normal to all appearances. Hearing was good on both sides, and the sense of smell appeared diminished on both sides, and almost lost on the left. Slight loss of expression existed on the left side of face on laughing. There was slight diminution of tactile sensibility also on the left side of face. He protruded the tongue normally. Great impairment of power existed in the left arm and leg, associated with a rigid state of the flexors. The sensibility was diminished on the left side. Involuntary evacuations of urine and fæces occasionally took place. Since admission the left arm and leg had been useless, and in the condition described.

October 1st, he passed into a state of partial unconsciousness, which lasted for thirty-six hours, during which time he took food, but would not answer questions nor do anything which he was told.

October 8th, passed into a similar condition, and remained in it forty-eight hours. A slight bed-sore developed on his nates on the 12th, owing to the condition of bedding, and for this he was transferred to a water bed.

October 14th, mental condition about as on admission, and pupils natural and react to light. He stated

that he could see well; hearing good; tongue natural. Left arm—partial flexion throughout; flexors moderately rigid; no voluntary movements possible; slight reflex action; sensibility diminished slightly. Left leg—partial flexion of leg on thigh, and thigh on abdomen, with slight rigidity of flexors; no reflex action. He was able to flex the legs to a very slight extent some little time after being asked to do so. Right arm presented a slight convulsive movement (jactitation). The orderly stated that this had existed for two days, and occurred several times a day when the arm was quiet. Otherwise, save that the right arm and leg were a little weaker than normal, nothing is noticeable about them. Muscles reacted readily to faradic current.

October 24th. The patient remained in about the same state as at last note till yesterday, when another attack of unconsciousness occurred, lasting twenty-four hours. The jactitation of right arm had occurred several times since last note.

November 1st. Had another attack of unconsciousness on October 28th, lasting six hours, and since that date his head, which always inclined to right side, had been more markedly turned to that side.

November 5th. Passed into another state of unconsciousness, which lasted till morning of the 8th, and in the afternoon passed into it again. In the evening of this day his pulse became rapid, 140; temperature 103° F. at 10 P.M., and at 4 A.M. of November 9 he died.

The temperature throughout the disease, with the exception of the day preceding death, and on one other occasion, did not exceed 99¼°, and was usually normal. Pulse regular and slow.

Post-mortem examination.—No lesion of other organ than skull and brain.

The skull-cap had an exostosis on its inner surface, situated one inch to the inner side of sagittal suture, on right parietal bone, near coronal suture.

The exostosis was irregular, about one-half inch long, three-fourths broad, and contained irregular depressions in which a new growth was situated. The dura mater was tightly stretched, and presented a depression corresponding to the site of exostosis, and in this also a new growth is situated. On opening the dura mater the arachnoid was found dry, and the sub-arachnoid space contained no fluid, and the brain bulged out as if contained in too small a place. The convolutions of both sides were small, and especially the right, and were flattened. The longitudinal sinus contained fluid blood, but was much narrowed along anterior lobe of brain.

The dura mater was adherent to brain for a space of 2 × 3 inches along longitudinal fissure, on the anterior lobe of brain, right side. This reached nearly to the posterior extremity of this lobe. The anterior lobe of brain on the right side was the seat of a new formation 3¾ inches long, 2 inches in depth, and 2¾ in width at widest portion. Section through it, near its posterior extremity, showed it to be of a grayish color, moderately firm, yielding a whitish material on scraping. It was distinctly circumscribed, and had a thin capsule over it. At this point it was covered by a thin layer of brain-tissue about $\frac{1}{16}$th inch thick.

Its shape, as seen on the surface of the brain, was irregular. It commenced 1¼ inches from anterior extremity of anterior lobe, and extended to the transverse convolution of middle lobe. Its anterior extremity was rounded in a somewhat pointed manner, the posterior more globular. It projected into the longitudinal fissure nearly as far as the corpus callosum, covered, as before mentioned, by a thin layer of cerebral tissue, and it had caused a depression in the anterior lobe of the left side, forming a fissure of a rounded shape about ¼ an inch in depth. Below, its lower portion reached nearly to the corpus callosum. The pons varolii seemed a little smaller than usual, and looked somewhat compressed. The small vessels of the pia seemed injected, but otherwise the brain contained less than usual blood. The brain contained only a few drops of serum. The cerebellum appeared normal. The medulla presented no change. Anterior pyramids appeared equal on the two sides.

Stated Meeting, November 25, 1874.

DR. H. KNAPP, PRESIDENT, in the Chair.

DR. SATTERTHWAITE, on behalf of the Committee on Microscopy, presented a detailed report of the microscopic examination of specimens referred to said committee at the previous meeting. The tumors exhibited by Dr. Post were found to be calcified lymphatics. The liver presented by Dr. Finnell was infiltrated with medullary cancer. The cyst from the pyloric extremity of the stomach consisted mostly of pus, in which were a few fat granules, some epithelial elements, some of which were ciliated in character, and a number of plates of cholesterine. The tumor of the parotid, removed by Dr. Sands, was of a mixed character, consisting of chondroma, myxoma, and carcinoma.

CARDIAC DILATATION, WITH AORTIC, MITRAL, AND TRICUSPID INSUFFICIENCY.

DR. DELAFIELD presented a heart, removed from the body of a farm-laborer, a native of Vermont, aged 26, who entered the Roosevelt Hospital, October 2, 1874. He was perfectly well, up to one year ago, when he was seized with what appeared to be an epileptiform convulsion, which began with a sensation of oppression in the epigastric region. This was speedily followed by loss of consciousness, continuing several seconds, and was succeeded for several minutes with clonic spasms of the extremities. He then enjoyed a feeling of comfort for half an hour, when vomiting set in, and persisted for several days. He was left much prostrated, and with severe pain in the epigastrium, and from which he was more than a week in recovering. He had four such attacks up to the time of admission, at intervals ranging from two weeks to six months. All these occurred during the day, and followed the same course. He did not suffer otherwise; had no cough, dyspnœa, or palpitation; no œdema of the lower extremities; no difficulty of micturition; no disturbance of vision, hearing, nor memory. He had been treated for epilepsy, and by the advice of his physician had not engaged in any hard work during the previous year.

On admission, he was found to be well nourished, being a large, muscular, robust man, of florid color, with good appetite, clean tongue, bowels regular, and with pulse and temperature normal. He complained only of slight dizziness when stooping. His urine was 1,030°, contained no albumen.

At the end of the fourth day after admission, he awoke with a sensation as if a weight were resting on his stomach, and appeared to be much agitated, his pulse being 190 per minute. There was, however, no dyspnœa. An hypodermic injection of carbolized Magendie's solution was administered, but gave him no relief. On the following morning (October 7), the patient began to vomit a transparent greenish fluid. He complained of great thirst, but vomited water immediately after it had been drunk. He lay flat in bed,

was very restless, heart beating violently, but had no dyspnœa. There being severe pain in the epigastrium, another injection of Magendie's solution was administered with good effect.

The vomiting abated somewhat after this, and hyposulphite of soda was administered, and after the symptom had ceased bicarb. of soda was presented in five-grain doses every three hours. Nothing occurred worthy of note until the fifteenth, when he fell to the floor unconscious, but recovered in a few seconds. Soon after he began to vomit a greenish watery fluid in great quantity, at the same time complaining of thirst and intense pain in the epigastrium. The hypodermic administration of Magendie's solution was necessitated twice in twenty-four hours to afford relief. He went on as usual until the nineteenth, when, seated at his bed, he lost consciousness for a few seconds; pulse 24 per minute, heart sounds normal. The succeeding day he suffered from nausea and pain in the epigastrium. His urine had a specific gravity of 1.020, contained a trace of albumen, with hyaline and granular casts in great abundance.

Dr. Delafield saw him on the 21st. The vomiting still continued, as did also the pain and distress in the epigastrium; pulse 48. The heart-beat was labored, irregular, feeble, and diffused, with an increased area of dulness. No impulse at apex was perceptible. The heart was beating so tumultuously that no valvular sounds could be discerned. Tinct. of digitalis was ordered as a cardiac sedative, and citrate of iron and quinine as a tonic. There was no particular change in the symptoms until the 7th of November, when the patient was seized with great distress. The heart beat tumultuously, and the radial puese could not be felt. There was, however, no dyspnœa, no cyanosis. There was no perceptible change in his symptoms until the 13th of November, when he quietly died.

Autopsy.—Brain normal. The lungs were congested and œdematous to a very considerable extent. The liver was in the usual congested condition so often seen in patients dead of heart disease. The spleen was also firm and congested. The kidneys were considerably increased in size, and were tolerably far advanced in Bright's disease. The mucous membrane of the stomach was congested. The trachea was of a red color, but there was no particular coating of mucus.

The heart weighed two pounds, and both ventricles were dilated. The aortic valves were slightly insufficient, as was also the mitral and tricuspid valves.

The case was interesting from the way in which the stomach symptoms marked those of the heart. The man had no idea that there was anything the matter with his heart; and until Dr. D.'s attention was called to him by the house-physician, he was inclined to look upon the case as one of irritative dyspepsia with attendant vomiting. Even if one knew the heart was in the condition described, the real condition of affairs would be impossible of detection until careful auscultation. The cause of death was œdema of the lungs produced by the irregular action of the heart.

THORACIC ANEURISM.

Dr. W. H. Thomson presented a specimen of thoracic aneurism. His attention was called to a patient in Bellevue Hospital, suffering from repeated paroxysmal attacks of dyspnœa with stridulous cough. She had been an inmate of the hospital on two or three occasions previously, with symptoms of emphysema, chronic bronchitis, and asthmatic breathing. On one occasion, her urine having been tested, was found to be albuminous.

The paroxysmal attacks of dyspnœa and stridulous cough led Dr. T. to suspect thoracic aneurism. On inspection of the chest the sternal veins were found to be enlarged and centring at the depression of the sternum. On examination of the heart a systolic murmur at the base was detected, while a second murmur was discovered at the apex. The breathing was markedly asthmatic, and was accompanied with such a number and variety of râles that auscultation of the heart was not very satisfactory. There was marked pulsation in the supra-sternal space, and in placing the finger there a slight thrill could be felt. Auscultation at that point discovered a very distinct aneurismal bruit.

The patient did not complain specially of any symptoms but the dyspnœa and the cough. There was no difference between the pulsations at the wrists. There was no interval between the beats of the heart and the pulse beat; the patient did not complain of any abnormal sensations about the head, neck, or down the arm. She denied ever having syphilis, but acknowledged that she had been a moderate drinker. She was well nourished, no symptoms of marasmus having as yet been developed.

On the morning of the 24th she expectorated blood, and had some considerable dyspnœa and dysphagia; this latter having made its appearance gradually a few days before. These symptoms increased in severity with great rapidity until the evening she vomited a a gallon of blood, and then succumbed.

At the autopsy the semilunar valves were found somewhat thickened. Two aneurisms were found, one of the ascending, the other of the descending branch of the aorta, one of these sacs bursting into the trachea. There did not seem to be any occlusion of any of the vessels, as far as could be ascertained by a cursory examination. The heart was only slightly hypertrophied. The kidneys were quite healthy, the presence of albuminuria being explained by the disease in the mitral valves.

Death Following a Vaginal Injection.—The following case is recorded by Lorain as one of those occasional instances where death has apparently been due to some mild manipulatory procedure on the female genitals.

A young girl, sixteen years of age, of delicate constitution, and who had commenced menstruating three months previously, entered the hospital to obtain treatment for vaginitis. A decoction of althæa was employed as an injection at first, but it was soon changed for a solution of nitrate of silver (gr. x.–℥ i.). This fluid was injected without force, the greater part returning through the vagina. Immediately afterwards, however, the patient complained of pain in the belly, and it increased so violently that she tossed about in the bed, her eyes became fixed, the skin became cold, the pulse small, and the face pinched. These severe symptoms abated after three hours; but vomiting then set in and continued, though in the following day the pain in the belly had moderated. Some days after, while the vomiting was still persisting, and she was suffering great distress, she gave a sudden cry and died. Tardieu made the autopsy, and found a purulent inflammation of the mucous membrane of the uterus, and the Fallopian tubes filled with pus. They were discharging into the peritoneal cavity, and there was diffuse peritonitis.—*Allg. Med. Central.-Ztg.*, 1, 1874.

MEDICAL SOCIETY OF COUNTY OF NEW YORK.

Stated Meeting, Nov. 23, 1874.

THE meeting was called to order by Dr. Ellsworth Eliot. After the transaction of some business the President delivered his Valedictory Address, and declared the Sixty-ninth Annual Meeting adjourned.

Dr. H. B. SANDS, President elect, immediately took the Chair, and called the Society to order.

The following names were announced:

HENRY T. PIERCE, 247 E. 116th St. A graduate in medicine at the College of Physicians and Surgeons, Med. Dep't of Columbia College, in 1870.

LAWRENCE JOHNSON, 319 W. 26th St. A graduate of Bellevue Hospital Medical College in 1868.

CHARLES ROTH, 232 E. 52d St. A graduate of medicine at the University of Giesen, Germany, in 1853, and College of Physicians and Surgeons, in 1866.

ROBERT CAMPBELL, 194 Lex. Ave. A graduate in medicine at Queen's University, Dublin, in 1872.

GEORGE T. HARRISON, 221 W. 23d St. A graduate in medicine at the University of Virginia, in 1866.

AUGUST HERMANN, 341 E. 49th St. A graduate in medicine at the College of Physicians and Surgeons, University of the State of New York, in 1858.

READ J. MCGAY, 160 W. 34th St. A graduate in medicine at the College of Physicians and Surgeons, Med. Dep't of Columbia College, in 1868.

JOSEPH SCHUETTER, W. 40th St. A graduate of the University of Würzburg, Bavaria, in 1864.

J. MURDOCH HARVEY, 107 W. 45th St. A graduate of Bellevue Hospital Medical College, in 1871.

EMIL ROSENBERG. A graduate in medicine at the University of Berlin, Germany, in 1855.

Library Committee.—C. A. Leale, J. S. Frazer, T. H. Holgate.

Committee on Intelligence.—F. A. Castle, L. D. Buckley, D. C. Carr, W. H. Katzenbach, R. J. McKay, P. B. Porter, Isaac Adler, Mary Putnam Jacobi, Eugene Peugnet.

Committee on Diseases.—Charles P. Russel, George Bayles, A. B. De Luna, G. H. Humphreys, J. M. Kellogg, J. V. S. Morley, Governeur M. Smith; and the

Meteorological Committee.—D. H. Goodwillie, J. W. S. Arnold, R. P. Lincoln, A. B. Judson.

Committee on Finance.—J. E. Janvrin, E. Bradley, H. P. Farnham.

Committee on Hygiene.—Moreau Morris, E. H. Janes, C. P. Russel, S. A. Raborg.

The President then read a letter, received from the Academy of Medicine, signed by Dr. Austin Flint, President, which contained a solicitation for the co-operation of the County Medical Society in the direction of securing a suitable building for the convenience of all the medical societies of the city. All members of the profession were invited to be present at a meeting of the Academy of Medicine, to be held the first Thursday evening in December, at which time the question would be discussed.

The letter was commended to the earnest attention of the Society.

PRESIDENT'S INAUGURAL.

At 8.30 P.M., the President began the delivery of his Inaugural Address, and spoke substantially as follows:

GENTLEMEN:—I accept with diffidence, but with unfeigned pleasure, the office to which you have called me; and I feel especially grateful for the honor you have conferred upon me, as I am constrained to regard it rather as an expression of your good-will than as a reward for any contributions which I have made to your scientific records or transactions. May I crave a continuation of your indulgence, while, with limited experience, I endeavor to discharge my duties as your presiding officer.

I can hope to do little more than strive to maintain the present usefulness and activity of the Society; but even to accomplish this I must invoke your cordial and earnest support. Surrounded as we are by many societies, we cannot afford to rest upon laurels already won, but must still continue to put forth our strength for the achievement of new honors, if we would hope to retain our vitality and prosperity.

In the act of incorporation, the objects of this Society are said to be the following: First, to regulate the practice of physic and surgery; and, secondly, to contribute to the diffusion of true science, and particularly the knowledge of the healing art. Let us inquire, very briefly, how far, and in what manner, we may hope to attain the objects thus set forth. As regards the first-named object, it may be said to have a historic rather than a present interest. Although in former times the authority of the County Medical Society to grant diplomas, licensing their possessors to practise medicine and surgery, was often exercised, such authority has been, during many years past, virtually superseded by that of the chartered medical schools. An attempt has been made, however, within the present to revive, by legislative enactment, the authority of the county medical societies; but it must be confessed that the law is too vague and uncertain to accomplish any great results. The law, however, I am inclined to regard as a step in the right direction; but I am not sanguine that under our form of government much will be done by State legislation to elevate the standard of medical requirement, and yet it is evident that until this end *is* accomplished, the ranks of our profession will continue to increase in numbers rather than in strength. There is one radical error, as I conceive, underlying everywhere our system of medical education. I allude to the authority of medical schools to grant degrees. So long as they possess this power, there is every reason to believe that they will abuse it; and that the competition between them will tend to lower rather than to elevate the standard of requirement for graduation. If, by legislation or otherwise, the authority to grant diplomas were vested in a competent board of examiners, independent of colleges, a great advance, in my opinion, would be made in medical education. The standard of requirement would then be made uniform, and could be easily raised high enough to exclude the ignorant and unqualified. Moreover, the competition among the different schools would be put upon a legitimate basis. Whether, at the present day, such a change is practicable, may perhaps be doubted; yet it can hardly be denied that it would greatly improve the tone of our profession, and win for it an increase of public confidence and support.

The second subject of our Society, namely, the diffusion of scientific knowledge, is the one to which our labor must be chiefly devoted. Our County Society is truly representative in character, and must be accepted as the exponent of scientific medicine in our city. A verdict obtained from it, upon questions of general interest and scientific value, may be regarded as the verdict of an impartial medical tribunal. The Society is devoted to no specialty, yet includes among its members many who are distinguished for special knowledge. The division of labor which specialism involves cannot fail to yield beneficial results; but it

may be carried so far as to be injurious; indeed, so far that the specialist may become distinguished not less for his ignorance of some things than for his knowledge of others, unless he occasionally surveys the whole domain of medicine, and is led to understand and acknowledge the inter-dependence and harmony of its various branches. Let us then, fellow-members, earnestly and honestly unite in the pursuit of scientific truth, each one of us contributing his treasure—be it little or great—to the common stock of knowledge, whence we may all derive something that shall enable us to practise, with greater certainty and success, the noble and beneficent art of medicine. Finally, gentlemen, I desire once again to thank you for the honor you have conferred upon me, and to assure you, that I shall strive, to the utmost of my ability, to discharge the important duties you have committed to my care.

Esmarch's bloodless operation.

Upon motion, the Inaugural Address was accepted.

The President then read a paper upon "Esmarch's Method of Bloodless Operation."

The following is a brief synopsis of the paper:—

In April, 1873, at the meeting of the German Surgical Congress of Berlin, Prof. Esmarch announced an important discovery, namely, that by the application of an elastic bandage to a limb, it could be rendered bloodless; and an operation could be performed when a limb was thus bandaged without loss of blood.

The principle may be old, but the success of the plan is doubtless due to the use of the *elastic* bandage as recommended by Esmarch. The subject was considered under three heads: (1) Mode and arrangement of application; (2) Advantages and disadvantages; (3) An estimate of the advantage as tested by our own experience.

The apparatus consists, first, of an elastic bandage or sheet-rubber, about two and a half inches wide, and, for convenience, divided into strips about three yards in length; second, a constricting band, for which some surgeons use a piece of the bandage; others, a rubber-cord, etc.; while Esmarch himself uses a piece of non-vulcanized rubber-tubing, which is much softer than the rubber-cord.

Several specimens of the articles employed were exhibited.

In ordinary cases the application of the bandage is quite simple, extending it from the tips of the fingers or toes up the limb, drawing it sufficiently tight to force all blood from the limb. As it advances, and when the point is reached at which the constricting band is to be used, the constricting band is made to take a few turns around the limb, is fastened by tying a knot, or by hook and chain, according to Esmarch's original plan. Then the bandage is removed, and the limb is ready for the operation.

Some experience is needed in order to apply the bandage with a proper degree of force, lest damage be done to the tissues by applying it too tightly, or venous hemorrhage permitted by applying it too loosely. As long as the constricting band is kept in position the operation remains bloodless. It cannot be employed in operations upon the trunk or face.

Advantages.—Prevention of loss of blood during the larger operations; it renders more certain and complete healing processes; diminishes the tendency to septicæmia; enables the surgeon to make difficult dissections with facility; permits easy extraction of foreign bodies, and facilitates examination of bones, etc.

Objections.—It is alleged that the pressure necessary for the proper application of the bandage and constricting band may seriously impair the vitality of the tissues—produce injuries to nerve-trunks, thus giving rise to paralysis.

Hemorrhage has been ascribed to the method. It is said that it may cause plethora of internal organs; cause gangrene; and that poisonous fluids may be pressed from the tissues into the general circulation.

The author of the paper then proceeded to analyze 141 cases, in which the method had been employed. The cases occurred in this city and Brooklyn, and included those which terminated favorably and unfavorably.

These operations were amputations of thigh, primary and secondary; leg, primary and secondary; wrist; forearm; secondary amputation of arm; primary of toes; double amputation of leg; amputation at knee-joint; excision of wrist and elbow; removal of tumor from popliteal space; ligaturing of wounded arteries; removal of large mammary tumor; necrosis, etc., etc.

The percentage of recoveries after amputations, of which there were forty-four primary for injury, and twenty-three secondary for disease, was believed to be much better than usually obtained. In no case were any serious results obtained from forcing blood back into the body, although the quantity must have been considerable, as in amputation of the thigh. A more exact observation is needed, however, to closely determine the safety of the bloodless method in this respect. It may be that such distention of the blood-vessels will prove to be dangerous in those persons who are suffering from certain organic diseases affecting internal organs.

The method is perfect in its results, so far as the bloodless character of the operation is concerned. It commonly happens that some venous oozing follows removal of the constricting band; but, taking this into consideration—in some cases it may be considerable in quantity—the patient will have proportionately more blood after the operation than before it; and in many cases this saving of blood is certainly very desirable.

No argument is needed to prove the excellency of the method in connection with operations upon deep-seated tissues. It is chiefly on account of hemorrhage that so great difficulty is experienced in exposing arteries, or nerves, or other important structures upon the living subject, as compared with that with which they may be exposed upon the cadaver. By this method dissections can be made upon the living body with as much facility as upon dead subjects; hence its very great value as an assistant in removal of deep-seated tumors, ligation of deep-seated vessels, operations upon bones, etc.

Caution.—Blood-vessels are somowhat liable to accidental division, on account of the bloodless condition of the tissues, and to pass unrecognized. The veins, from the thinness of their coats, are especially liable to this accident; hence a good use of anatomical knowledge is necessary, lest what is a bloodless operation in the beginning, may be a very bloody one before the wound is closed. The surface of the wound should therefore be closely observed, lest an open vessel be overlooked. In the Hunterian operation for aneurism this method is not allowable, because the artery can generally be easily exposed and the bandage might endanger rupture of the sac while being applied. The production of local anæsthesia is claimed for the method, but the question is one which calls for further experience.

Disadvantages.—(1) Sloughing; (2) Secondary hemorrhage; (3) Paralysis.

First—With regard to sloughing, it was said to follow this method in nine cases. Seven of those cases were primary amputations. The histories were read. The inference was drawn that the sloughing in these cases could hardly be attributed to the method. The elastic bandage may have had some share in producing sloughing; and if hereafter it becomes established that this compression is dangerous, of course we shall be obliged to abstain from its employment. The minimum degree of pressure should be carefully obtained, and the material for constricting the limb should be of the softest quality. The solid cord should be abandoned. The operation should not be prolonged more than is absolutely necessary. The constricting band has been retained one hour without unfavorable results; but a great majority of operations can be performed in much less time.

Second—Hemorrhage. There were four cases in which hemorrhage was said to occur; but from the histories of the cases the inference was legitimate that in none of them was the hemorrhage the consequence of the use of the method.

Third—Paralysis. This had occurred in one case, following amputation of the arm. The patient almost completely regained motion. There was one case in which neuralgic pains followed the operation. It was probable that the results in both these cases were due to too great pressure produced by the cord. It is doubtless a very wise precaution to apply the bandage above gangrenous tissues, thus avoiding the danger of forcing poisoned fluids into the system.

Properly applied and carefully guarded by precautions, it is one of the most valuable surgical expedients of modern times.

At the close of the reading of the paper Vice-President Dr. Emmet took the chair, and discussion ensued as follows:

Dr. James R. Wood remarked that he had resorted to this method in twenty-five cases without a single bad result that could be attributed to it. From his experience, sloughing has not been so great as when the operation had been performed without the use of the elastic bandage. Hemorrhage, of course, will occur in connection with this method, when vessels are neglected and left unsecured, the same as when the operation is performed in any other manner; but he was of the opinion that hemorrhage was not as liable to take place when this method is employed as when the operation is performed in the old style. So far as oozing of blood is concerned, after the constricting band is removed, it has, in his experience, usually been but trifling, and was easily controlled by the application of cold or dry lint. With reference to the cord, he had discarded it from the first. He then related a case showing the value of the method in ligating arteries, in which he had tied the deep palmar arch, after the application of the elastic bandage, without any difficulty whatever, for the reason that he could pursue his dissection with perfect ease, without having the view obstructed by blood, which would have been impossible without the assistance of this method. The constricting band he employs consists of a strip of the material used for bandaging the limb, doubled, making it half as wide as the original bandage. This makes a broad surface, which is not liable to injure the tissues by pressure, and he regards it as better than either cord or tube. If it becomes necessary to amputate for the removal of parts which have been invaded by gangrene, apply the bandage, commencing *above* the gangrenous tissues. In children and old people the cord, for purposes of constriction, should never be used. He certainly had fallen in love with the method, and believed that Esmarch was entitled to the credit of having brought it before the profession. It is true, he himself had for more than twenty years been accustomed to elevate limbs to be amputated, carefully forcing all the blood possible into the general circulation, and in many cases had applied a roller bandage before securing the tourniquet. So far, however, as applying the *elastic* bandage and rendering the tissues bloodless, he believed Esmarch justly entitled to the credit of having fully brought out the method. Dr. Wood continued the discussion at some length by relating cases and calling up points of interest connected with the operations.

Dr. Frank H. Hamilton remarked that he had employed the method in eight cases; four amputations and four exsections. The histories of the cases were briefly referred to. No accidents had followed the operations which could be positively attributed to Esmarch's method, and he fully approved of its use.

Dr. Markoe remarked that his experience in the adoption of this method had been quite limited; but in the cases in which he used it he had been much gratified and satisfied regarding its efficacy as a method for preventing hemorrhage, particularly in sections made for the removal of necrosed bone. In one case, and one only, an accident occurred which is perhaps worth marking down as one to be kept in mind. The operation was amputation at the knee-joint, upon a boy at Roosevelt Hospital. The limb had already commenced to slough at the lower portion, but it was determined to cut quite near the diseased parts, within an inch of the parts already in a condition of slough, and the operation terminated very satisfactorily, for there was no sloughing following the operation. Five or six weeks afterwards, however, the stump being healed, there occurred in the middle of the thigh, just opposite the point where the cord passed around the limb, a deep-seated abscess, nearly down to the bone, which was freely opened. At the point of suppuration there seemed to be a sort of sclerosis of the tissues which extended down to the end of the stump, and suggested that too great pressure had been made by the rubber cord at the time of the amputation. He was of the opinion that the cord was not a proper article with which to make pressure. This case gave rise to the impression in his mind that the constricting portion of the apparatus should be a somewhat broad bandage, something like that suggested by Dr. Wood, and perhaps it would be well, in addition, to first cover the skin with a few turns of a roller bandage.

Dr. Krackowizer (who was the first surgeon to use the method in this city) remarked that he had little or nothing to add to what had already been said. He was, however, in full accord with the suggestion that all suppurating or gangrenous tissues should be carefully excluded from the pressure of the elastic bandage. The constricting band can hardly be too soft and broad. He had been accustomed to use a soft rubber hose about three fingers wide and three feet long. He had also been accustomed to fastening the ends of the constricting band, not by making a knot, which is sometimes troublesome to loosen, and is liable to produce undue pressure, but by bringing the ends of the band together perpendicular to the surface of the limb, and then fastening them close to the limb with a piece of tape. Esmarch himself is now using a sort of clamp similar to that used for securing the pedicle in ovariotomy. In order to get a bandage he splits a rubber hose large enough to give the necessary width;

this makes a bandage that can be much more easily cleansed, is much more readily obtained, and is much less liable to be the medium of communication for poisonous elements.

Dr. Watrous reported a case which came under his observation in Niagara Co., in which sloughing followed amputation of the forearm.

Dr. Willard Parker approved of Esmarch's method, although he had had no personal experience in its use. He was of the opinion that it would do for the surgeon about what anæsthetics had already done for the patient. Anæsthetics place the patient in a condition of perfect rest while undergoing the most severe operations, and now comes in the Esmarch apparatus to relieve the surgeon of all annoyance from blood in very many cases, and permits him to sit down and deliberately perform his operation. There was one thing, however, it seemed to him, which should not be forgotten, namely, the age of the patient should be taken into consideration, for tissues are much more liable to slough, as the result of pressure, in the young and old subject than in the middle-aged, other things being equal. Again, condition of system, whether the patient is vigorous or feeble, should not be lost sight of etc., etc. All these things must come in to enable us to form a correct judgment with regard to the value of the method, and to decide with reference to the cases in which it can be most satisfactorily and safely employed.

Dr. Gurdon Buck spoke decidedly in favor of this method of controlling hemorrhage. He expressed the opinion that, in cases of compound fracture which required the application of some controlling force to arrest hemorrhage, such force could be attained by means of this method *without* producing the same amount of suffering as would be realized from the application of the tourniquet.

Dr. J. H. Pooley, Jr., of Yonkers, reported six cases of amputation where the Esmarch bandage was used, and good results followed in all the cases. He valued it highly in smaller operations; and spoke of removal of the ungual phalanx in case of felon; also of removal of needle from the finger of a washerwoman with the greatest facility, after applying an elastic bandage.

Dr. Raphael remarked that he fully approved of the method under discussion, but believed that every surgeon should be careful about carrying it to extremes, lest it fall into disrepute. He was of the opinion, for example, that in very many instances where persons vigorous, healthy, and full of blood had suffered from injuries which might render amputation of the leg, or arm, or thigh necessary, such patients would do better with some loss of blood; and that the loss of blood which might follow amputation after the ordinary plan might be desirable rather than otherwise.

Discussion closed. There being no further business, the Society adjourned at 10.20 P.M.

NEW YORK MEDICAL LIBRARY AND JOURNAL ASSOCIATION.

Stated Meeting, November 20, 1874.

Dr. J. C. Peters, President, in the Chair.

AGE IN RELATION TO CHILD-BEARING.

The paper for the evening was read by Dr. Fordyce Barker, upon "The Age of Women when the Capacity for Childbearing Ceases." The question is, Can the limits of capacity for conception in women be positively determined?

Questions are frequently asked professional witnesses in courts of law relative to the truthfulness of reports from men of unquestioned veracity, which have an immediate bearing upon the question now under discussion. For example, "Do you know that Dr. Benjamin Rush, one of the signers of the Declaration of Independence, has reported a case of a woman who gave birth to a child after she had reached the advanced age of sixty-one years; and do you doubt in the least that his report is a true one?" Questions of like dignity are frequently propounded to the medical witness. There are plenty of cases reported in medical books where it is said that women have given birth to children when over fifty-eight years of age, etc.

The object of the paper was to show that, physiologically, and as a matter of experience, there are *limits* in the reproductive functions of women.

The ordinary opinion is, that conception and menstruation travel hand in hand, and that when menstruation commences and ceases, capacity for conception also commences and ceases.

But there are thousands of women who menstruate regularly, and yet are sterile, without apparent pathological cause; and, on the other hand, many women have given birth to children after menstruation has entirely ceased.

There are well-authenticated cases—indeed such cases had fallen under the observation of the author of the paper—where women have given birth to large families of children, and *yet never menstruated at all.*

It sometimes happens that women menstruate irregularly and scantily previous to marriage, and when marriage takes place menstruation ceases entirely, yet give birth to children. One case of this kind was reported as having occurred in the doctor's own practice, where the woman gave birth to *ten* children.

There are many cases, in which the evidence is unmistakable, where children have been born after menstruation has ceased for a number of years. Cases of this kind were given from the author's own practice, in which children had been born three and five years after the cessation of menstruation.

The conclusion was reached that ovulation and menstruation, though often coincident, do not necessarily bear the relation to each other of cause and effect.

Ovulation does not always occur at the time of menstruation. This proposition was substantiated by reference to several standard authorities.

Menstruation, therefore, is to be regarded as an accidental and incidental phenomena, and is simply a flow of blood from the interior of the uterus at stated periods, irrespective of ovulation. Ovulation is essential to conception, but menstruation is not. The occurrence of a regular flow of blood from the genital organs of a woman over fifty-five or fifty-eight years of age, is no evidence of the occurrence of ovulation at the same time. When senile atrophy of the ovaries takes place, ovulation ceases, and conception is no longer possible. This period is reached, as a rule, between the fortieth and fiftieth year of the woman's age. In very exceptional cases, this change does not take place until one, two, three, or four years later.

These are well-established physiological facts, and have been proven by thousands of *post-mortem* examinations; and, in addition to this, not a single case of any scientific value has been known of a woman over fifty-five years of age who has given birth to a child, except in the case of Sarah, the wife of Abraham.

There are many cases reported where women from fifty-eight years of age to eighty years of age have

given birth to a child; but in a scientific inquiry the Doctor holds that we are bound to reject all statements which are opposed to the universal experience of mankind, where the probabilities against the truth of the assertion are as a million to one, unless the statement is supported by such evidence as would be regarded as conclusive in a court of law.

Some of the cases reported have their foundation in tradition; others in newspaper sensations, etc. Others, again, have arisen from misquotation and perversion of correct reports, etc.

Several cases which have been referred to and accepted by writers upon medical jurisprudence, were taken up and considered.

The case reported by Pliny, which has been so often referred to by medical writers, was one in which the child was born 163 years B.C., while Pliny wrote twenty-three years subsequent to the birth of Christ. The very length of time between the occurrence of the event and the record of the historian is sufficient to confirm the belief that the story probably had its foundation in tradition. Again, cases are quoted from *Haller* to prove that women have given birth to children at the advanced age of sixty-three to seventy years. There is no evidence, however, that Haller ever practised midwifery; and by reference to his Elementary Physiology, published in 1568, it will be found that he simply says: "That he has *read* of such cases," etc.

The case of Ann Woods, so frequently referred to, as reported by Dr. Benjamin Rush, in which it is said that she gave birth to a child after she was sixty-one years of age, is founded upon the simple statement of the old woman herself, when she came to the door of Dr. Rush begging for food.

Several other reports were reviewed, and rendered doubtful with regard to truthfulness. One authentic case has been found where the woman gave birth to a child after she had reached the age of fifty-five years.

This case has been reported by Dr. Davies, of Hertford, England. There are many well-established cases where women have given birth to children between the ages of fifty and fifty-four years, and the author of the paper had personally attended three women in confinement who were over fifty years of age—one being fifty-three years of age.

The question of age at which childbearing is possible is one frequently brought before the courts. At this point the decisions of the courts, especially in England, were quoted somewhat extensively. The final proposition submitted was, that the laws of physiology, the experience of mankind, and decisions of the courts will justify the medical witness in declaring that a woman over fifty-five years of age is past the period of childbearing.

DR. PALLEN remarked that although the presumption is against women's bearing children after fifty years of age, still he would dislike to state in a court of law that the woman who had the monthly flux *per vagina*, and who had no indications that the retrograde metamorphosis of age had manifested itself in the uterus or ovaries, even if she were fifty-five years of age, was incapacitated for childbearing. Discharges from the vaginas of old women may be the result of various *pathological* causes; but there are cases well authenticated in which extensive disease or degeneration of the ovary has taken place, yet menstruation took place regularly and conception has taken place under those circumstances.

DR. MUNDE remarked that he was of the opinion that menstruation and ovulation continued together, and when one ceases the other also ceases. Upon that supposition he reported several cases, and gave numerous data, bearing upon the question of the appearance and continuation of menstruation. There are exceptions, to be sure, but the general rule he believed to be that the power of conception ceased with the cessation of menstruation.

DR. HUBBARD reported a case of ovulation and conception in a lady who never menstruated after marriage, but had given birth to *eight* children. Here was evidence that ovulation and conception may take place without the occurrence of menstruation.

DR. ROGERS mentioned a case in which the woman had been delivered of a child at the age of fifty-three years.

DR. CARO remarked that during his residence in Sicily the government recognized the possibility of childbearing commencing at the age of eleven years and two months, and continuing to the age of fifty-four or fifty-five years. He reported a case, of which he had personal knowledge while living there, in which the woman had given birth to thirty-one children; and that twenty-two of them had sat at the same table. This woman gave birth to her last child when she was fifty-four years old. It was also supposed that she had a double uterus, from the fact that a child was born every *six months*. Unfortunately, when the woman died no *post-mortem* was obtained.

DR. SMITH asked Dr. Barker concerning the evidence that menstruation and ovulation did not necessarily occur together.

DR. BARKER replied that menstruation and ovulation are most frequently coincident, but they do not necessarily bear the relation to each other of cause and effect (without entering upon theories): (1) because the one may exist without the other, as proven by numerous well-authenticated cases; (2) cicatrices have been found in ovaries, indicating rupture of Graafian vesicles, many years previous to the appearance of menstruation; and have also been found in old women (fresh cicatrices) after menstruation had ceased for a long time; (3) we now have eight well-authenticated cases in which women have menstruated and continued to menstruate after both ovaries were removed, rendering ovulation impossible. This, to him, was conclusive evidence that menstruation or monthly sanguineous flow is not dependent upon ovulation.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 19, 1874.

DR. AUSTIN FLINT, PRESIDENT, in the Chair.

MAMMARY DISEASES DURING LACTATION.

THE paper for the evening was read by Dr. Salvatore Caro upon "Diseases of the Mammary Gland during Lactation."

After brief reference to enlargement of the gland, and what is known as milk-fever, associated with the establishing of the process of lactation, the author of the paper turned his attention to the consideration of some of the anomalies of this function. Of these agalactia and galactia were first considered in their etiology, symptomatology, and treatment. The most reliable remedy for agalactia, according to the author's experience, was the leaves of the plant Ricinis Communis. The powdered beans may be employed in absence of the leaves, but are not nearly as efficacious. In absence of both, *nursing*, good food, etc., are sometimes of great benefit.

With regard to galactia three things should be observed with the view of preventing injury to the

mother: (1) Ascertain whether the woman has a well-developed nipple or not; (2) whether the infant is healthy and without deformities or not, such as tongue-tie, hare-lip, etc., etc.; (3) whether the woman intends nursing or not.

Haggerty's "Ladies' Companion" was regarded as the best instrument for removing milk from the breast.

Various remedies were mentioned that had been employed for the purpose of arresting the secretion of milk, but the application regarded with the most favor by the author of the paper was ext. bell., gum camph., and stramonium ointment combined. Spread this over the breast every four hours and cover with oil-silk.

Galactocele was next considered. The doctor remarked that he had been in the habit of opening these collections as early as possible, and had been annoyed, as a result of this procedure, by failure in healing of the opening made until the mother had ceased lactation. The aspirator, however, may be resorted to with very great satisfaction. By the use of this instrument nursing need not be interrupted, and danger of rupture of the milk-duct be avoided. The operation can be repeated without inconvenience. Obstruction of lactiferous ducts by colostrum casts was mentioned as a common cause of this difficulty.

Affections of the nipple were next considered somewhat in detail, and the liability of being followed by mammary abscess. Prevention of nipple troubles by attention *previous* to confinement was regarded as being of prime importance. Haggerty's nipple-shield was recommended.

Mastitis is by far the most serious affection, and the general outline of treatment was such as the profession at least *should* be familiar with.

Dr. Garrish spoke somewhat at length upon the subject under discussion. He was of the opinion that ice should *never* be used in cases of mastitis, for the reason that he had seen one case in which *both breasts* were frozen, and subsequently completely sloughed away.

Dr. Lusk favored treatment of galactocele by means of the aspirator. He had never derived very much benefit from the castor-oil leaves in cases of agalactia. He had been much more successful in establishing lactation in such cases by having the breast well stroked from base to nipple by an experienced nurse, and making traction upon the nipple by a breast-pump, than by any method he had ever resorted to. There are cases in which there is lack of development in the acini of the breast, and certainly in such cases applications or treatment of any kind would be useless. In those cases in which it becomes necessary to draw the nipple out, as a general rule, he believed it better to remove the child entirely, than to run the risk of developing abscess by nursing and pulling at the nipple.

When the breast is properly emptied before the third day after confinement, milk-fever is rare. In all those cases in which erosion and fissure of the nipple are present, it is better to remove the child from the breast at once, for there is much less liability of developing abscess if the milk is renewed by some artificial means rather than by permitting the child to nurse.

Dr. Peaslee remarked that there are cases in which it is very desirable to arrest the secretion of milk *entirely*—for example, when the child is still-born.

The important question is, Do we know of any method of completely preventing the secretion of milk? He believed that in any case we may realize an entire arrest of the function of lactation by the use of belladonna.

℞. Aqu. ext. bell..... ʒi.
Aquæ, or
Glycerin..... ʒi.
M.

Keep the breasts constantly wet with this solution, commencing before any signs at all of tumefaction have appeared, is the plan he adopts, and has never had any trouble at all with such cases.

Dr. Sell remarked that occasionally he had found it difficult to arrest the secretion of milk by the use of belladonna alone. In such cases he had had admirable success (1) by enjoining abstinence from fluids as much as possible; (2) by giving a few doses of iodide of potassium, in addition to the belladonna. By these three things combined he had *never* failed to produce perfect agalactia.

With regard to mammary abscess, prophylaxis was regarded as the essential element. Sore nipples being a frequent cause, they must be carefully looked after, and not only that, but one step farther should be taken, and guard against the occurrence of sore nipples. He mentioned the fact that he had seen eight thousand successive cases of confinement in one hospital in Europe, and not a single mammary abscess among them all, for the reason that prophylactic treatment was rigidly observed.

Dr. Hubbard remarked that in case the child was still-born, he did nothing at all with the breast, except to apply camphorated oil and lead-plaster perhaps, and let them entirely alone. He had never had any trouble with this plan of management.

Dr. Lusk sustained the remarks of Dr. Hubbard.

The Academy then adjourned.

Correspondence.

MEDICAL MATTERS IN PHILADELPHIA.

To the Editor of The Medical Record.

Sir:—I unintentionally did injustice in my last letter to the "Woman's Hospital and Dispensary," by intimating that this institution was only just now entering upon its course of usefulness in the construction of its new building. The latter, I should have said, is intended for the purposes of the Woman's College, which at present occupies a portion of the hospital proper. When the college building is completed, the hospital will be able to accommodate itself to the wants of the future, by the construction of additional pavilions; but even now it is said to be unusually well adapted by its elevated position and admirable ventilation for success in operation. So much opposition has at various times crossed the path of the women, in their efforts to promote medical teaching and learning, that I was doubtless regarded by them, for the phraseology of my last letter, as another recruit in the same adverse cause, especially as I so completely ignored the fact that the annual report of the hospital last January was the thirteenth so offered; that during the year there had been treated 207 patients at the hospital, 602 at their homes, and 2,044 in the dispensary.

I am disposed to think, from my own observation, that the profession in Philadelphia is not so much cut up into sectional cliques as it seems to be in your own city. There appear to be more generally harmonious relations and mutual confidence here; less jealousy of successes; a more cordial interchange of friendly salu-

tation and professional fraternity. I think we have far fewer specialists here, in proportion to the whole number engaged in practice, than in New York. There are very few of us who can or do sit in our offices the whole morning, receiving calls from sufferers with affections of the throat, the chest, or the brain, and can afford to ignore the claims of general practice. Few here would make a living on specialties alone, and I am very sure that few could or would have the conscience to charge the fees that we hear of sometimes in New York, or would be likely to retain their patients at such exorbitant figures. The rule that a second party will estimate the first in proportion to the latter's estimation of himself will not always hold good in our old-fashioned way of valuation of individuals according to their true merits. Even in the rivalry of competing schools here, there is at the present day a kindly element of mutual congratulation at the result of honorable labor in teaching, that is in marked contrast with the olden times, when, for example, a professor in one institution falsely charged the professors of another medical college with lying in wait at depôts and students' boarding-houses for the purpose of securing additions to their classes; and even maliciously intimated that when one of the latter corps of medical instructors was once an assistant of his, the assistant's collection of calculi was very small, while it had now become remarkably large. In those days the students were conveyed from the college to the Blockley Hospital, over the river, on alternate clinical days—which at that time were every Wednesday and Saturday—in omnibuses, or in large sleighs, when necessary; but a great transformation has now taken place. The Pennsylvania Hospital, which at that period was looked on as almost an appendage of the University, is likely now, from a certain amount of propinquity, to be patronized in its clinics chiefly by the students of the Jefferson Medical College; while the University and the Philadelphia Hospital (almshouse) are such near neighbors that they can almost shake hands with one another. It may be said as a literal truth, without implying the slightest disparagement to that noble institution, that the University, by its removal, has certainly gone to the almshouse. It seems probable that in the course of years the ground now occupied by the latter public institution will be sold—for the ground is very valuable along the western edge of the Schuylkill—and a new almshouse constructed at a greater distance from the centres of population and trade; but even then the University will have its already successful hospital within its own grounds, with all its facilities extended and its means of usefulness in every way amplified.

The proceedings of the American Public Health Association, which met here last week, were so fully reported in your daily papers that any detailed account of them at this time would be superfluous. The Convention made a most favorable impression, and did good service to the cause it had so much at heart. It went seriously to work with its programme of papers, and did not step aside for purposes of feasting and enjoyment, even in the evenings, when two or three hours were regularly employed in addresses of great practical utility. Our Board of Health pales its insignificant fires and sinks deep into its shoes, as the juvenile element of the population would express it, in the presence of such an assemblage of earnest philanthropic men; for be it known that in Philadelphia every "Board," no matter what its objects, is nothing if not political, and our local sanitary council, even though composed of men of different party views, does not assume a status above that of political machines in general. Our city would be absolutely startled if the Board of Health of Philadelphia should ever rise above the notoriety of imperfection in street-cleaning, and attempt to grapple with the general principles of public health. It is an interesting query why it was not represented at this national gathering, the absence of such a delegation being a confession of weakness that should not have been tolerated by sensible, health-loving citizens. Otherwise, as one of the daily press suggested, the national association might have been enlightened on points of great practical moment, being particularly those referring to the problem, how not to do a thing, illustrated by new views on street-cleaning and kindred topics. There seems to have been a wide diversity of views in the Health Association on the best modes of hospital construction.

The construction that might be put on Professor Gross's sweeping remarks on hospitals by the laity, is something of a different nature; for while others contended that barrack hospitals or larger buildings were the more desirable form, he expressed the view that "hospitals, however well constructed, especially during the prevalence of epidemics, are, as a rule, pest-houses, or breeders of disease-germs, and therefore, under such circumstances, unfit as receptacles for sick, wounded, and lying-in persons." It will be seen that in this view, hospitals are looked on as pest-houses at all times, but much more so at some times than others. We may anticipate many a reply to this rather broad view of the subject from those who honestly believe that even the old hospitals, which were built before the light of modern experience was thrown upon them, have not justly deserved this wholesale condemnation as disease-breeders. We shall not wonder if, with a very natural sensitiveness, these institutions will now give us statistics that will, prove how much they have accomplished, with but moderate loss of life. And yet, such papers as those presented by Professor Gross, and other gentlemen of the association, give much food for thought, and induce many a reflection which might not otherwise have been indulged in, as to the possibilities of past successes of treatment under different hospital arrangements, and the probabilities of happy results in the days to come. Dr. Billings referred to the model hospital of the future, with its rooms for one or two patients; but not a word was said about the model patient himself in these after-days of perfection in hospital construction, when it will be a luxury to be sick, even in the absolute solitude of a single-bedded ward. In the fertility of our imagination we think we see him now, lonely and deserted, in his own private ward, with fresh-air flued or fresh air-flued (we are getting slightly confused) opening in the wall near the head of his bed, with air-holes in the floor beneath it, and a funnel over it, "communicating with the aspirating channels;" what more could he desire? With so much air introduced, and got rid of by these excellent contrivances, we are afraid the model patient of the future will be tempted to put on airs himself.

We had the pleasure of a visit to our city a few days since from Drs. L. A. Sayre and Jas. R. Wood, of your city, who, I believe, fell into the hands chiefly of our surgical friends here. In addition to these, we had a strong representation of your active workers in another field, in the persons of the gentlemen who attended the sessions of the Health Association, of whom I may mention, without being considered invidious, as one of those who contributed much to its success, the courteous secretary, Dr. Elisha Harris.

PHILADELPHIA, *Nov.*, 1874.

THE MEDICAL RECORD:

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

GEORGE F. SHRADY, A.M., M.D., Editor.

Published on the 1st and 15th of each Month by

WM. WOOD & CO., 27 Great Jones Street, N. Y.

New York, December 15, 1874.

THE CLOSE OF VOLUME IX.

WITH the present number the Ninth Volume of THE MEDICAL RECORD closes. We have striven to render it worthy of the confidence of the profession; and if the liberal support which we have obtained during the past year, and the hearty endorsement of the course which THE RECORD has taken in the discussion of subjects of current medical interest, are to be taken as guarantees of the appreciation of such labors, we are satisfied. We have endeavored to be impartial, truthful, and just; and if our efforts to make the journal thoroughly independent have not met with the approbation of all, we have at least the consciousness of having performed our duty to the best of our ability.

The communications coming from the representative men in this and other countries can speak for themselves, and we believe their character for practical utility fully sustains one of the leading features of this periodical. In returning thanks to our contributors we take pleasure in specially mentioning the services of the respective members of our staff. In the department of Progress of Medical Science, Dr. T. E. SATTERTHWAITE has worked up the German exchanges; Dr. F. A. CASTLE, the French and English; Dr. E. B. BRONSON, the American; and Dr. GEORGE R. CUTTER, the Dutch, Scandinavian, Italian, and Portuguese. Dr. WESLEY M. CARPENTER has furnished us with the reports of the Practice of the Hospitals in New York and Philadelphia, and has supplied the Lecture Department with many verbatim, as well as the usual reports from the Societies.

The Review Department has been enriched by criticisms from acknowledged experts, and the opinions therein expressed should carry with them the requisite amount of unbiassed authority.

With the next number we commence THE RECORD as a weekly issue; and, while hoping for continued favors, we shall leave nothing undone to make it a valuable, practical medical journal for the general practitioner.

VIVISECTION.

SOME of the County Societies in this State have taken a very commendable interest in declaring in favor of vivisection, and by the passage of appropriate resolutions have shown how strongly the current of professional opinion sets against Mr. Bergh. We do not see why all the societies in the State should not put their protest upon record. There is no doubting the fact that there would be but one opinion upon the subject; but the accumulation of such opinions is what will tell against any adverse legislation during the coming winter. The State Society will doubtless speak upon this subject at its next annual meeting, and in order that it may do so with becoming effect, every auxiliary body should send to it in time individual expressions of opinion. In view of the threats made by the Society for the Prevention of Cruelty to Animals, this course will be a wise one and may prevent much trouble.

TREATMENT OF THE INSANE IN PHILADELPHIA.

To the general reader, as to the general public, the investigation held in Philadelphia, a few days since, into the condition of the Hospital and Insane Departments of the Philadelphia Almshouse presented some features which reflected rather severely on the powers that be, and their failure to provide the necessary accommodation for the health and comfort of those afflicted creatures. It is bad enough in these days to have poverty as your warmest friend, clinging to you through all your cares and troubles, and to be obliged to be a private in one of the regiments of paupers, wearing the almshouse garb for no other crime than this; but to be compelled, as many of the insane have been, to share the occupancy of their cells with violent maniacs, and suffer maiming or personal injury, and even death in consequence, is more than ordinary humanity can bear to think of without a shudder. We always wake up to reformation in such matters after the mischief has been committed. Nothing would so stir up the activity of sluggish local legislators as a few murders or atrocious maimings of the insane by the insane; and yet nothing is more likely to occur at any moment than some sensational incident of this kind. Nothing would remedy the present condition of things half so well as the placing of a few councilmen in the cells as companions of those already occupying them. There is nothing like experience as a teacher. It was shown in the published testimony of the attending physician and surgeon, that in the Insane Department there are accommodations for only 600, while they have 1,106 patients. The Board were therefore compelled to place four, five, and six patients in one cell, with manacles on their hands or feet, to prevent them from attacking each other.

Dr. Maury, who has been connected with the hospi-

tal department for thirteen years, said that the accommodations were at times stretched to double their capacity by placing patients on the floor, and in the performance of his duties he had been compelled, night after night, to step across the patients thus placed. Dr. Pepper said that a remedy might be found in the erection of one-story inexpensive structures upon the grounds of the institution by the Guardians of the Poor. He expressed only the universal sentiment of the medical fraternity of that city when he said that increased surgical and medical accommodations were imperatively needed. Dr. Wood said that in a ward which is but 72 feet long, 18 feet wide, and 7 feet 4 inches high, with inadequate ventilation, the population in the winter is generally thirty and over. This overcrowding resulted in a largely increased mortality over other hospitals. He favored the erection of one-story frame or brick hospital barracks. Dr. Richardson thought the best plan would be to erect a separate asylum somewhere in the country for the insane, for about 500 patients, for the treatment of curable cases, and to keep the present hospital for chronic cases. A few nights ago, one patient had his collar-bone broken; another had his ear bitten off, and another had his cheek bitten. The recovery of insane patients is greatly hindered by this overcrowding. Dr. Parry said that he had been connected with the hospital for ten years, and in that time the mortality in confinements had increased from one in 152 to one in 25. Is it not time that the matter was looked into?

Reports of Hospitals.

BUFFALO GENERAL HOSPITAL, BUFFALO, N. Y.

NOTES ON SURGICAL CASES.

By C. C. F. Gay, M.D.,
ATTENDING SURGEON.

VALGUS HALLUX—RESECTION OF HEAD OF THE FIRST METATARSAL BONE.

Emma W., aged nineteen years, was brought to hospital on account of being disabled from abduction of both great toes. One toe was turned at a right angle, overlying the smaller toes; the other was turned nearly to a right angle, underlying the smaller toes.

The metatarsal prominence was much inflamed, the inflammation involving both integument and bone.

The process of abduction commenced nine years ago. The patient had been a dancing girl, and had been accustomed to sustain her weight often upon the great toes, and to this she attributes the present deformity. She has suffered greatly from pain, and has heretofore obtained but temporary relief from treatment of the existing arthritis.

May 2d, 1874, I operated, in the presence of several members of the hospital staff, upon both the feet. Esmarch's bandage was applied from the toes up, embracing two-thirds of the leg. Chloroform was used. I made a single longitudinal incision over the metatarso-pharyngeal prominence down to the bone, one and a half inches in length, disarticulated the joint, pass d the chain-saw around the metatarsal bone, and removed half an inch of the head of the bone. The toe now dropped into line with the longitudinal axis of the foot. I immediately operated, in the same manner, upon the opposite foot.

Not a drop of blood was lost in either operation, and consequently sponging was not required; but to prevent hemorrhage when the bandage should be removed, a compress was applied to the wound, which was sufficient to prevent loss of more than a few drops of blood from the returning current. The wound was left open, and warm-water dressings applied. On the 20th the wound of the left foot was closed. An abscess occurred on the dorsal aspect of right great toe, which delayed union of the wound.

June 10th. Both toes are well, the patient walking about the ward, and the result is perfect, the patient having the entire use of the toes, with the deformity completely relieved, but with a half inch shortening.

I am induced to report these two cases from having read in The Medical Record the report of a case operated upon by my friend Dr. Frank H. Hamilton, on April 7th, 1873, which, so far as I know, is the first case on record for relief of the deformity by this method.

My cases recovered equally well with Dr. Hamilton's, without the submersion of the feet in warm water, but had the necessary apparatus been at hand I should have used the same method of after-treatment which the doctor recommends.

VARICOSE ULCERS.

Chronic ulcers of the legs, standing in relation to varicose veins as cause and effect, are treated in this hospital by obliteration of the veins, or rather partial *occlusion* or *diminution* of the calibre of the veins;* and since the treatment in all cases by potassa cum calce has invariably been attended with success, this at present is the only method employed. As the treatment and after-treatment has varied during the past year from that formerly adopted, I will report in brief one of the more recent cases treated.

H. D., sailor, aged thirty-eight years, entered hospital May 13th, 1874. Has varicose ulcers upon both legs, just above the external and internal malleoli, two inches in length by an inch in breadth, existing for eighteen months. The varices are small but numerous.

18th.—To-day produced six eschars upon each leg, over the more prominent veins, and applied warm-water dressings instead of slippery-elm poultices, as practised formerly.

24th.—Made four additional eschars upon each leg. In four days three more eschars were made.

In just one week from the application of the second crop of eschars, the ulcers were entirely closed and well.

On June 20th the eschars were healed and patient discharged.

The variation alluded to, in treatment of this from former cases, consists in causing a rapid succession of eschars and in the use of warm-water dressings. The cases progressed as rapidly and kindly as when the poultice is used, no erysipelas or hemorrhage having supervened.

FRACTURE OF THE NECK OF THE SCAPULA (RIGHT SIDE).

H. B., teamster, aged twenty-four years, was thrown from his wagon, striking upon the right shoulder; was

* Vide Theory of Varices, by the writer, published in Buffalo *Medical and Surgical Journal*, May, 1873, page 575.

brought to hospital April 7th, 1874. There was acromial prominence, with corresponding infra-acromial depression, entire mobility of the arm, and when the patient was placed upon his back in the recumbent posture the deformity was removed and crepitation obtained.

Dr. Moore's clavicular bandage was applied, and its use alone continued until May 30th, when the patient was discharged with entire use of the arm, and without perceptible deformity.

RADICAL CURE OF HYDROCELE.

Mr. M., aged twenty-five years, entered hospital as private patient, December 19th, 1873, with large hydrocele of left side. On December 20th, I operated by the method heretofore so successfully employed at the hospital by the silk seton.

The seton was introduced by means of a needle five inches in length, threaded at the point with four strands of ordinary-sized suture silk. Introduced at the fundus of the scrotum, the point of the needle was made to emerge four inches above the point of entrance. On withdrawing the needle some fluid escaped. The trocar was then employed, drawing off the whole of the fluid. On December 25th, there was much swelling but no pain. The seton was removed. December 27th, constitutional symptoms were developed which subsided the following day. The scrotum now became erythematous, the redness extending up the abdomen as far as the umbilicus. The erythema lasted for five days. Lotion of acetate of lead was applied to scrotum.

The swelling gradually diminished, but not until there had been a considerable quantity of pus discharged from the puncture made by the needle.

The patient left hospital with scrotum still enlarged. On October 1st, 1874, there remains no vestige of the disease. The scrotal tissue is redundant. By the use of a suspensory bandage a varicocele which formerly existed has entirely disappeared. In operating by this method I prefer introducing the needle first and using the trocar afterwards. I prefer to do so, not because it is simpler and easier in performance—which is not the case—but because I have thus far obtained better results than when the trocar had been first employed.

ARMY NEWS.

GENERAL ORDERS No. 125.

WAR DEPARTMENT,
ADJUTANT-GENERAL'S OFFICE,
Washington, Nov. 17, 1874.

AN important part of the duty of a medical officer of the army is the supervision of the hygiene of the post or command to which he is attached, and the recommendation of such measures as he may deem necessary to prevent or diminish disease among the troops.

For this purpose he shall at least once a month examine and note in the medical history of the post the sanitary condition of the quarters, including all buildings belonging to the post, the character and cooking of the rations, the amount and quality of the water supply, the drainage, and the clothing and habits of the men, and make a report thereon in writing to the commanding officer, with such recommendations as he may deem proper. If the recommendations be approved and carried out, the medical officer shall note the fact in the medical history of the post. If the action recommended be deemed impracticable or undesirable, the commanding officer shall indorse his objections on the report and forward it to the Department Commander. A copy of such endorsement shall be furnished to the medical officer, who shall record it in the medical history of the post.

The Annual Sanitary Reports now required from medical officers shall in future be forwarded through their commanding officers, who shall forward them through the regular channels, with such remarks as shall be necessary.

The same course will be taken with the Special Sanitary Reports called for by Circular Orders No. 2, Surgeon-General's Office, October 15, 1874, which, as modified, is as follows:

"Medical officers will forward, with the Sanitary Reports of December 31, 1874, a special report on the following subjects, to be made as full and be as carefully prepared as possible, as the results are desired for publication:

"I. On the food of the army, its quantity, quality, and mode of preparation. What is the character of the articles forming the regular ration as furnished to the post? What is the average amount of saving for post fund? What articles of food, and in what amount, are purchased by the post fund, obtained from post garden, or by hunting or fishing? Ice, how obtained and in what quantities furnished?

"How is the cooking done for the men? Give bill of fare for a week at different seasons. Is the food of the men inspected daily? How often is it inspected by the medical officer? Have any complaints been made by the men about the food, and have any cases of disease occurred which may be attributed to the food or its mode of preparation? If so, specify. Character of kitchen and bakery fixtures. Has any special apparatus, such as the Warren cooker or the felt box been tried? If so, give results. Character and amount of extra articles furnished by the Commissary Department for officers' use. Diet of the sick, and hospital fund. Remarks, suggestions, and recommendations.

"II. Duties of medical officers in scouting parties and expeditions. Nature and amount of medical supplies required; how carried. Means of transportation for wounded. Remarks.

"III. On military punishments and their effect on the health and morale of the soldier. Give instances, recommendations, etc.

"IV. Personal cleanliness of the men. What are the post regulations, if any, with regard to bathing? What facilities are afforded? How often are the men's blankets washed?

"The above report must be forwarded promptly through the proper channel to the Medical Director on or before January 1st. Medical Directors will forward them through the Department Commanders, with their own observations and comments on the points above referred to."

The medical history of the post shall be kept with the hospital records, and shall not be removed therefrom. It shall be open to the examination of the commanding officer, and the attention of inspecting officers is especially directed to this book, and they will report the manner in which it is kept.

By order of the Secretary of War:

E. D. TOWNSEND,
Adjutant General.

Official:

Assistant Adjutant General.

Official List of Changes of Stations and Duties of Officers of the Medical Department United States Army, from November 19 to December 4, 1874.

GIBSON, J. R., Assistant Surgeon.—Granted leave of absence for 15 days, upon completion of his examination for promotion. S. O. 260, c. s., A. G. O.

HUBBARD, V. B., Assistant Surgeon.—Assigned to duty at Jackson Barracks, New Orleans, La. S. O. 187, Department of the Gulf, Nov. 17, 1874.

PHILLIPS, H. J., Assistant Surgeon.—Assigned to duty at Fort Ontario, Oswego, N. Y. S. O. 236, Military Division of the Atlantic, Nov. 30, 1874.

KINSMAN, J. H., Assistant Surgeon.—Relieved from duty at Fort Abercrombie, D. T., and to report in person at these Headquarters. S. O. 252, Department of Dakota, Nov. 16, 1874.

HEIZMANN, C. L., Assistant Surgeon.—Relieved from duty in Department of the Platte, to report in person to the president of the Army Medical Board for examination for promotion, and upon its completion, by letter to the Surgeon-General. S. O. 260, c. s., A. G. O.

YEOMANS, A. A., Assistant Surgeon.—Granted leave of absence for 3 months on surgeon's certificate of disability. S. O. 250, A. G. O., Nov. 17, 1874.

DICKSON, J. M., Assistant Surgeon.—Assigned to duty at Savannah, Ga. S. O. 186, Department of the South, Nov. 17, 1874.

By S. O. 260, War Department, Nov. 30, 1864, the following named Assistant Surgeons (recently appointed) are directed to report as follows for assignment to duty:

WINNE, CHARLES K., in person, to Commanding General, Department of the Platte.

AINSWORTH, F. C., in person, to Superintendent U. S. Military Academy, West Point, N. Y., for temporary duty.

HAVARD, VALERY, by letter, to the Commanding General, Department of Dakota.

HOFF, JOHN VAN R., by letter, to the Commanding General, Department of the Platte.

PAULDING, H. OFFLEY, in person, to the Commanding General, Department of Dakota.

ADAIR, GEORGE W., in person, to Commanding Officer, Newport Barracks, Ky., for temporary duty.

BROWN, PAUL R., by letter, to the Commanding General, Military Division of the Atlantic.

MOSELEY, EDWARD B., by letter, to the Commanding General, Department of the South.

JACKSON, DONALD, in person, to the Commanding General, Department of Texas.

SEMIG, BERNARD G., by letter, to the Commanding General, Department of California.

SKINNER, JOHN O., in person, to the Commanding General, Department of the Columbia.

FINLEY, JAMES A., in person, to the Commanding Officer, Fort Monroe, Va., for temporary duty.

DE LOFFRE, AUGUSTUS A., in person, to the Commanding General, Department of the Missouri.

BEDAL, SYLVESTER S., by letter, to the Commanding General, Military Division of the Atlantic.

HAMILTON, JOHN B., in person, to the Superintendent Mounted Recruiting Service, St. Louis Barracks, Mo., for temporary duty.

WILCOX, JOHN B., in person, to the Commanding General, Department of the Missouri.

MAUS, LOUIS M., by letter, to the Commanning General, Department of the South.

MAUS, L. M., Assistant Surgeon.—Assigned to duty at McPherson Barracks, Atlanta, Ga. S. O. 191, Department of the South, Nov. 25, 1874.

JOHNSON, HENRY, Medical Storekeeper.—Granted leave of absence for 3 months. S. O. 253, A. G. O., Nov. 20, 1874.

Medical Items and News.

VIVISECTION.—At a meeting of the New York Pathological Society, held Nov. 12th, 1874, the following preamble and resolutions were unanimously adopted:

Whereas, Certain publications have recently been brought to the notice of this Society, having for their object to excite a prejudice against the propriety and utility of experiments upon living animals, as performed for the purpose of medical investigation, and to control or prohibit such experiments by legal enactment; and

Whereas, The members of this Society have abundant reason to know that the method of experimentation upon animals has been productive of many useful discoveries in pathology, as well as in physiology and practical medicine; therefore,

RESOLVED, I. That experimentation upon animals is of the same value for investigation and discovery in medicine as experiments in physics and chemistry for the corresponding branches of Natural Science;

II. That this method of investigation, by increasing our knowledge of the causes and consequences of disease, leads to enlarged facilities for its prevention and cure, and has thus been the means, in many instances, of preserving human life, and relieving human suffering;

III. That, in the opinion of this Society, it would be in the highest degree impolitic and unjust to prohibit experimental investigations of this nature, or to withdraw from them the protection and recognition which is wisely afforded by the law.

Unanimously adopted.

H. KNAPP, M.D., *President.*
GEO. F. SHRADY, M.D., *Secretary.*

NEW YORK LARYNGOLOGICAL SOCIETY.—At the annual meeting of the New York Laryngological Society, held Nov. 12th, at the residence of Dr. Clinton Wagner, the following officers were elected for the ensuing year:

President, Andrew H. Smith; *Vice-Prest.*, Woolsey Johnson; *Secretary*, George M. Lefferts.

Executive Committee, Morris J. Asch, Charles McBurney, Beverley Robinson.

THE FRENCH GOVERNMENT offer a prize of $60,000 for the discovery of an effectual means of destroying the vine scourge, *phylloxera;* and a committee has been appointed to regulate the mode of competing. Voluntary subscriptions on the part of departments, parishes, companies, or private persons will be allowed to increase the value of the prize.

ABSENCE OF THE CORPUS CALLOSUM.—Dr. Malinverni, Professor of Pathological Anatomy in the University of Turin, reports in the *Gazetta delle Clinichi* a case in which there was no corpus callosum. The patient, who died of typhoid fever, was well known to have had well-developed intellectual faculties. The septum lucidum and the convolution of the corpus callosum were absent, and the lateral ventricles communicated freely with each other.

Medical Department of Life Insurance.

TOBACCO AND LIFE INSURANCE.

By E. R. MAXSON, M.D.,

OF SYRACUSE, N. Y.

THERE are so many in the Life Insurance business who use tobacco in some form or other, that it subjects one to the liability of bringing down upon himself the excerations of all thus under the influence of the weed, to even make a suggestion bearing upon the influence of the habitual use of tobacco in shortening human life.

And yet it must be admitted by every candid and well-informed man, not under its influence, and who has taken the pains to think, that the poisons of tobacco—nicotin, nicotianin, and its empyreumatic oil, as introduced into the human system, in the various modes in which it is used—by chewing, smoking, and snuffing—tend strongly, not only to produce various forms of fatal disease, but by directly depressing vitality, in every instance, to greatly lessen the average of human life; and, what is still worse, they cause a strong inclination for intoxicating drinks.

The fatal diseases caused by the poisons of tobacco are undoubtedly very numerous. But cancer of the lip, disease of the heart, and collapse of the nervous system, with symptoms very like apoplexy, may perhaps be the most frequent; and all of them are to be dreaded by life insurers. As an examiner, medical practitioner, and careful observer, in this country and abroad, I am confident that many other diseases, tending to shorten human life, indirectly, are the result of the habitual use of tobacco. I could, did space permit, refer to numerous cases that have fallen under my observation and care during the past year, in which there was a collapse of the nervous system, simulating apoplexy, and evidently a direct result of the accumulation of nicotin in the system, from the habitual use of tobacco. I was called to see one such case in a distant State, and the man recovered under the use of tonics; he was quite largely insured, as I learned; another, an insurance agent, less fortunate, because his disease was longer neglected, or not diagnosticated, died of imbecility, and so his agency wound up.

Intoxicating drinks, the terror of life-insurers, are taken as a rule, I am confident, by those who become habitual drunkards, to counteract the depression of vitality caused by the poisons of tobacco previously used. And hence, in tobacco may be found not only the direct cause of many fearful and fatal diseases, but also of most of the drunkenness and disease attending the use of intoxicating drinks.

Insanity is admitted to be a frequent result of the use of tobacco by those most competent to judge. And yet, I am not aware that life insurers have ever taken into account that tobacco produces an imbecility short of insanity, disqualifying all who use it in a greater or less degree from exercising that care and discretion in the observance of the laws of health which they might and would employ were they not under the influence of the poison. It should be remembered that very many physical and mental ills are thus produced, which, with all the direct effects, tend to make tobacco one of the most pernicious influences in destroying and shortening human life, and hence to be dreaded by life insurers.

In view of all the facts bearing upon this important subject, I respectfully suggest: That as human life is greatly shortened, directly and indirectly, by the use of tobacco, if tobacco users are to be insured at all, their average of life should be estimated separately from those not addicted to its use, and they should be charged accordingly, thus relieving those not addicted to the use of the weed; and further, that all life insurance agents should be selected from among those not addicted to the use of tobacco.

THE LONGEVITY OF BRAIN-WORKERS.*

By GEORGE M. BEARD, A.M., M.D.,

OF NEW YORK.

THOMAS HUGHES, in his life of "Alfred the Great," makes a statement that "the world's hardest workers and noblest benefactors have rarely been long-lived."

That any intelligent writer of the present day, and especially a writer who, like Mr. Hughes, is a thoughtful student of mental hygiene, should make a statement so absolutely untrue, shows how hard it is to kill an old superstition.

The remark is based on the mischievous theory, which —against the clearest evidence of general observation —has been held for centuries, that the mind can be used only at the injurious expense of the body. This theory has been something more than a mere popular prejudice; it has been a professional dogma, and has inspired nearly all the writers on hygiene since medicine has been a science.

Between 1864 and 1866, while preparing a thesis for graduation, I obtained statistics on the general subject of the relation of occupation to health and longevity that convinced me of the error of the accepted teachings in regard to the effect of mental labor. These statistics, which were derived from the registration reports of this country and of England, and from a study of the lives of many prominent brain-workers, were incorporated in an essay on the subject, that was delivered before an Association of Army and Navy Surgeons in New Orleans in 1863, and afterwards published in the "Hours at Home" Magazine. The views I then advocated, and which I enforced by statistical evidence, were:—

1st. That the brain-working classes—clergymen, lawyers, physicians, merchants, scientists, and men of letters—lived very much longer than the muscle-working classes.

2d. That those who followed occupations that called both muscle and brain into exercise, were longer lived than those who lived in occupations that were purely manual.

3d. That the greatest and hardest brain-workers of history have lived longer on the average than brain-workers of ordinary ability and industry.

4th. That clergymen were longer lived than any other great class of brain-workers.

5th. That longevity increased very greatly with the advance of civilization; and that this increase was too marked to be explained merely by improved sanitary knowledge.

6th. That although nervous diseases increased with the increase of culture, and although the unequal and excessive excitements and anxieties attendant on mental occupations of a high civilization, were so far both prejudicial to health and longevity, yet these incidental evils were more than counterbalanced by the fact that fatal inflammatory diseases have diminished in frequency and violence in proportion as nervous dis-

* An extract from the advance sheets of the Transactions of the American Public Health Association.

eases have increased; and also that brain-work is, *per se*, healthful and conducive to longevity.

Many of these views have since received various and powerful confirmation, and by a number of independent observers. The statistics on this subject I have endeavored to use without abusing them; to draw from them only those lessons that they are really capable of teaching. Among those classes who live mainly by routine and muscular toil (mechanics, artisans, laborers, etc.), change of occupation is the rule rather than the exception, especially in this country; and any statistics of mortality derived from the Registration Reports, are, so far as these classes are concerned, of but little value in the study of the relative effects of the different occupations on health and longevity. Another important complication arises from the fact that certain occupations, as clerkships, positions in factories, teaching, etc., are followed almost exclusively by the young and middle-aged; while other callings, as judgeships, are filled only by those in middle and advanced life. Another difficulty arises from the fact that some important occupations, as journalism, for example, are adopted only by a limited number; and the number in them who annually die is too small to afford any basis for comparison. But this generalization is, I am persuaded, admissible, that the greater majority of those who die in any one of the three great professions—law, theology, and medicine—have, all their lives, from twenty-one upwards, followed that profession in which they died. The converse generalization, that the great majority of those who die in the muscle-working avocations have all their lives followed some kind of muscle-working employment, however frequently they may have changed from one to another at different periods, is also true. Very few who once fairly enter theology, medicine, or law, ever permanently change to a purely physical calling; and, on the other hand, the number of those who begin life as farmers, laborers, and mechanics, and end it as lawyers, physicians, or clergymen, is quite limited, even in the United States, where every man has a better chance to follow the bent of his genius than in any other country.

A comparison, therefore, of the longevity of the professional and of the muscle-working classes, as derived from Registration reports, such as I have made, is quite justifiable. The value of this comparison would be vitiated if it could be proved that those who enter the professions are originally healthier and stronger, and come from better stock than those who enter physical avocations; but in this country, the practice has been to allow the more delicate members of a family to enter a profession, whilst the tough and hardy work on the farm or learn a trade. Here, as in Europe, there is growing up a distinctively intellectual class who live solely by brain-work; it is, however, not from this class alone, but from the farming, mercantile, and artisan class that the ranks of the professions are filled.

Great Longevity of Great Men. I have ascertained the longevity of five hundred of the greatest men in history. The list I prepared includes a large proportion of the most eminent names in all the departments of thought and activity.

It would be difficult to find more than two or three hundred illustrious poets, philosophers, authors, scientists, lawyers, statesmen, generals, physicians, inventors, musicians, actors, orators, or philanthropists, of world-wide and immortal fame, and whose lives are known in sufficient detail, that are not represented in the list. My list was prepared, not for the average longevity, but in order to determine at what time of life men do their best work. It was, therefore, prepared with absolute impartiality; and includes, of course, those who, like Byron, Raphael, Pascal, Mozart, Keats, etc., died comparatively young. Now the average age of those I have mentioned I found to be 64.20.

The average age at death, at the present time, of all classes of those who live over twenty years, is *about fifty*. Therefore, the greatest men of the world have lived longer, on the average, than men of ordinary ability in the different occupations by fourteen years; six years longer than physicians and lawyers; nineteen or twenty years longer than mechanics and day laborers; from two to three years longer than farmers; and a fraction of a year longer than clergymen, who are the longest-lived class in our modern society. The value of this comparison is enforced by the consideration that longevity has increased with the progress of civilization, while the list I prepared represents every age of recorded history. A few years since I arranged a select list of one hundred names, comprising the most eminent personages, and found that the average longevity was *over seventy years*. Such an investigation any one can pursue; and I am sure than any chronology, comprising from one to five hundred of the most eminent personages in history, at any cycle, will furnish an average longevity of from sixty-four to seventy years. Madden, in his very interesting work, "The Infirmities of Genius," gives a list of two hundred and forty illustrious names, with their ages at death. The average I found to be sixty-six and a fraction.

In view of these facts, it may be regarded as established that "the world's hardest workers and noblest benefactors" have usually been very long-lived.

CAUSES OF THE GREAT LONGEVITY OF BRAIN-WORKERS.

The full explanation of the superior longevity of the brain-working classes, would require a treatise on the science of sociology, and particularly of the relation of civilization to health. The leading factors, accounting for the long life of those who live by brain-labor, are as follows:—

1. *The inherent and essential healthfulness of brain-work.* To work is to grow; and growth, except it be forced, is always healthful. It is as much the function of the brain to cerebrate, as of the stomach to digest; and cerebration, like digestion, is normal, physiological, and healthful. In all organizations of force, the exercise of force develops more force; work evolves strength for work. A plant that is suffered to bud and bloom is more sturdy and longer lived than the plant that is kept from the light, or trimmed of all its blossoms. By thinking, we gain the power to think; functional activity, within limits, tends to vigor and the self-preservation of an organ, and of the body to which the organ belongs. The world has been taught that the brain can be developed only at the expense of the other organs of the body; granting that brain-work strengthens the brain itself, the rest of the body is impoverished thereby—hence disease, and early death. But recent investigations in cerebro-physiology, seem to indicate that the centres of thought in the anterior region of the brain, are also the centres of muscular motion; and hence it may perhaps be inferred that to develop the brain may be one method of developing the muscles.* It is certain that the brain-working class are, on the average, well developed muscularly; and in size and weight are superior to the purely muscle-working classes.

* I here refer to the experiments of Hitzig, of Berlin, on the electrical irritation of the brains of living animals.

2. *Brain-workers have less worry, and more comfort and happiness than muscle-workers.* Worry is the converse of work; the one develops force, the other checks its development, and wastes what already exists. Work is growth; worry is interference with growth. Worry is to work what the chafing of a plant against the walls of a greenhouse is to limitless expansion in the free air. In the successful brain-worker, worry is transferred into work; in the muscle-worker, work too often degrades into worry. Brain-work is the highest of all antidotes to worry; and the brain-working classes are therefore less distressed about many things, less apprehensive of indefinite evil, and less disposed to magnify minute trials, than those who live by the labor of their hands. To the happy brain-worker, life is a long vacation; while the muscle-worker often finds no joy in his daily toil, and very little in the intervals. Scientists, physicians, lawyers, clergymen, orators, statesmen, literati, and merchants, when successful, are happy in their work, without reference to the reward; and continue to work in their special callings long after the necessity has ceased. Where is the hod-carrier, that finds joy in going up and down a ladder; and, from the foundation of the globe until now, how many have been known to persist in ditch-digging, or sewer-laying, or in any mechanical or manual calling whatsoever, after the attainment of independence? Good fortune gives good health. Nearly all the money of the world is in the hands of brain-workers; to many, in moderate amounts, it is essential to life, and in large or comfortable amount it favors long life.

Longevity is the daughter of luxury. Of the many elements that make up happiness, mental organization, physical health, fancy, friends and money—the last is, for the average man, greater than any other, except the first. Loss of money costs more lives than the loss of friends, for it is easier to find a friend than a fortune. Almost all muscle-workers are born, live, and die poor. To live on the slippery path that lies between extreme poverty on one side, and the gulf of starvation on the other; to take continual thought of to-morrow, without any good result of such thought; to feel each anxious hour that the dreary treadmill by which we secure the means of sustenance for a hungry household may, without warning, be closed by any number of forces, over which one has no control, to double and triple all the horrors of want and pain, by anticipation and rumination,—such is the life of the muscle-working classes of modern civilized society; and when we add to this the cankering annoyance that arises from the envying of the fortunate brain-worker who lives in ease before his eyes, we marvel not that he dies young, but rather that he lives at all.

3. *Brain-workers live under better sanitary conditions than muscle-workers.* They have better food and drink, warmer clothing, breathe purer air, and are less exposed to fatal accident and the poison of disease. None of the occupations are ideal; none fulfil all the laws of health; but the muscle-working callings are all more or less unhealthy; tradesmen, artisans, common laborers, and even farmers (who combine muscle with brain-work), all are forced to violate sanitary law every hour of their lives; not one out of ten have enough good food; many are driven by passion and hunger to excess in the worst forms of alcoholic liquors; for a large number, sleep is a luxury of which they never have sufficient for real recuperation; healthful air is but rarely breathed by the laboring classes of any large city; exposure to weather, that brings on fatal inflammatory disease; accidents that cripple or kill—in all these respects, the muscle-worker, as compared with the brain-worker, is at stupendous disadvantage.

4. *The nervous temperament, which usually predominates in brain-workers, is antagonistic to fatal, acute, inflammatory disease, and favorable to long life.* Comparative statistics have shown that those in whom the nervous temperament prevails, live longer than those in whom any one of the other temperaments prevail, and common observation confirms the statement. Nervous people, if not too feeble, may die every day. They live, but they do not die; they talk of death, and each day expect it, and yet they live. Many of the most annoying nervous diseases, especially of the functional, and some even of the structural varieties, do not rapidly destroy life, and are indeed consistent with great longevity. I have known a number of men and women who were nervous invalids for half a century or more, and died at an advanced age. It is one of the compensations of nervousness that it protects the system against those febrile and inflammatory diseases that are so rapidly fatal to the sanguine and the phlegmatic.

5. *Brain-workers can adapt their labor to their moods and hours and periods of greatest capacity for labor, better than muscle-workers.* In nearly all intellectual employments there is large liberty; literary and professional men especially, are so far masters of their time that they can select the hours and days for their most exacting and important work; and when from any cause indisposed to hard thinking, can rest and recreate, or limit themselves to mechanical details. Thus, there is less of the dreadful in their lives; they work when work is easy, when the desire and the power are in harmony; and, unlike their less fortunate brother in the mill or shop, or diggings, need not waste their force in urging themselves to work. Forced labor, against the grain of one's nature, is always as expensive as it is unsatisfactory; it tells on the health and on life. Even coarser natures have their moods, and the choicest spirits are governed by them; and they who worship their moods do most wisely; and those who are able to do so, are the fortunate ones of the earth.

Again, brain-workers do their best work between the ages of twenty-five and forty-five; before that period they are preparing to work; after that period, work, however extensive it may be, becomes largely a matter of routine. Lawyers and physicians do much of their practice after forty; but to practice is easy, to learn is hard—and the learning is done before forty or forty-five. In all directions, the French motto holds true: "It is the first step that costs." Successful merchants lay the foundations of fortune in youth and middle life, to accumulate, and recreate, and take one's ease in old age; thus they make the most when they are doing the least, and only become rich after they have ceased trying to be so.

With muscle-workers, there is but little accumulation, and only a limited increase of reward; and in old age, after their strength has begun to decline, they must, with increasing expense, work even harder than before.

To this should be added the consideration that manual employments cost as much force after they are learned as before; they can never, like many intellectual callings, become so far forth matters of routine as to require little effort. It is as hard to lay a stone wall after one has been laying it fifty years, as during the first year. The range of muscular growth and development is narrow, compared with the range of mental growth; the day-laborer soon reaches the maximum of his strength. The literary or scientific

worker goes on from strength to strength, until what at twenty-five was impossible, and at thirty difficult, at thirty-five becomes easy, and at forty a pastime; and besides he has the satisfaction that the work done so easily at thirty-five and forty is incomparably better than the work done with so much difficulty at twenty-five.

6. *Comparative Longevity of the Professions.* Inasmuch as professional men do not usually change their callings, but die in the special profession in which they have lived, the vital statistics, at least of lawyers, physicians, and clergymen become of value in determining their comparative longevity. I found in my researches made several years ago, that lawyers and physicians lived to be about fifty-seven or fifty-eight.*

CAUSES OF THE EXCEPTIONAL LONGEVITY OF GREAT BRAIN-WORKERS.

The explanation of the surprising longevity of great brain-workers is quite complex. The readiest answer to the problem would be that brain-work is healthful; and that, therefore, the better the brain and the harder it is worked, the longer the life of its possessor. Such a solution would not be entirely true; and if it were true unqualifiedly, it would clear up but one side of the question.

The answer is to be found, not in any single consideration, but in many, as follows:

1. *Great men usually come from healthy, long-lived ancestors.* Longevity is a correlated inheritance of genius. In order that a great man shall appear, a double line of tough, more or less vigorous fathers and mothers must fight in the struggle for existence and come out triumphant. However feeble the genius may be, his parents or grandparents are usually strong; or if not strong, are long-lived. Great men may have nervous if not insane relatives; but the nervous temperament holds on to life longer than any other temperament. Longevity is, of course, hereditary, like all qualities or tendencies of organized life; and if great men come from long-lived stock, this fact is one most potent explanation of their exceptional longevity.

2. *A good constitution usually accompanies a good brain.* The cerebral and muscular forces are correlated. This view, though hostile to the popular faith, is yet sound and supportable. A large and powerful brain in a small and feeble body is a monstrosity. "In monstrosities Nature reveals her secrets," says Goethe. When a specially small and delicate frame sustains a specially large and potent brain, men wonder, as at a tree bowed to the earth by the weight of its over-abundant fruit. Everywhere Nature is a slave to the necessity of correlation or correspondence of parts and organs with each other; and unless she heeds it, all organized life would become awry and misshapen. In all the animal realm there is a general though not unvarying relation between the brain and the body of which it is a part, and to which it ministers.

3. *Great men who are permanently successful have correspondingly greater will than common men; and force of will is a potent element in determining longevity.* The one requisite for great success is "*grit;*" and, more uniformly than any other single quality or combination of qualities, it is found in those who attain high distinction. That longevity depends not a little on the will, no one will dispute. The whole subject of the relation of mental character to longevity is one of vast interest, and is too far-reaching to be here discussed; but this single point must be granted without argument, that of two men every way alike and similarly circumstanced, the one who has the greater courage and grit will be the longer lived. One does not need to practice medicine long to learn that men die that might just as well live if they resolved to live; and that myriads who are invalids could become strong if they had the native or acquired will to vow that they would do so.

4. *Great men work more easily than ordinary men.* Their expenditure of force to accomplish great things is less plenteous than the expenditure of ordinary men to accomplish such things. A Liverpool draft-horse draws with ease a load at which a delicate racer might tug and strain without moving it. Ruskin is quite right when he says that the greatest work is done easily. The best action is the unconscious. It is the essence of genius to be automatic and spontaneous. The common mind cannot attain this spontaneity, or, at any rate, only to a slight degree.

5. *The advantages that belong to the brain-working orders in general.* Of these I have already spoken in some detail. The great brain-workers of the world have not all been rich; neither have they all been poor; some of them have lived a portion of their lives, but very few all their lives, in extreme want; and the majority have been most of the time surrounded with at least moderate comforts.

CAUSES OF THE GREAT LONGEVITY OF CLERGYMEN.

When, in 1867, I first called attention to the fact that clergymen were longer-lived than any other class of brain-workers, serious doubt was expressed whether there might not be some error in my statistics. So much has been said of the pernicious effects of mental labor, of the ill-health of brain-workers of all classes, and especially of clergymen, that very few were prepared to accept the statement that the clergy of this country and of England lived longer than any other class, except farmers, and very naturally suspected a lurking fallacy. Other observers, who have since given special attention to the subject, have more than confirmed this conclusion, and have shown that clergymen are longer-lived than farmers.

The Rev. Josiah F. Tuttle, D.D., President of Wabash College, Indiana, has ascertained the ages of 2,442 clergymen—600 Trinitarian Congregationalists, 317 Presbyterians, 231 Episcopalians, 268 Baptists, 208 Methodists, 166 Unitarians, etc.,—and found that the average was "a little over 61 years." "Considerably over one half of the whole were over 60 years of age at their death; three fourths of the whole were over 50 years old at death; and seven-eighths of the whole were over 40 years of age at death." Dr. Tuttle found that the average age at death of 408 individuals (not clergymen), and who had died over 21 years of age, was a little over 51 years. This result pretty nearly corresponds with mine.

But by far the more thorough investigation on this subject, and one that must fully settle the question for all minds over whom facts have any influence, has been recently made by Rev. J. M. Sherwood, formerly editor of "Hours at Home," and now Secretary of the

* "An investigation made by a Berlin physician into the facts and data relating to human longevity shows the average age of clergymen to be 65; of merchants, 62; clerks and farmers, 61; military men, 59; lawyers, 58; artists, 57; and medical men, 56. Statistics are given showing that medical men in England stand high in the scale of longevity. Thus, the united ages of twenty-eight physicians who died there last year, amount to 2,354 years, giving an average of more than 84 years to each. The youngest of the number was 80; the oldest, 93; two others were 92 and 89 respectively; three were 87, and four were 86 each; and there were also more than fifty who averaged from 74 to 75 years."

"Society for Promoting Life Insurance among Clergymen." This gentleman has labored long and patiently in this department, and has ascertained that the average age of our ministers at death is sixty-four. The report (I quote from Document No. 3 of the Society) states: "this is four years more than the longevity of the most favored (?) class; ten years more than in the other professions: and from twelve to nineteen years above that of mechanics, artisans, miners, operatives, and the like."

These conclusions differ slightly from mine, but the difference is in favor of clergymen. Mr. Sherwood informs me that he had obtained the average from a list of ten thousand clergymen, whose ages at death he ascertained at great labor by consulting "the minutes of ecclesiastical bodies for thirty years past, the catalogues of theological seminaries, Wilson's 'Historical Almanac,' Dr. Sprague's 'Annals of the American Pulpit,' biographical dictionaries, the files of religious journals, etc."

A list of ten thousand is sufficient and more than sufficient for a generalization; for the second five thousand did nothing more than confirm the result obtained by the first. It is fair and necessary to infer that if the list were extended to ten, twenty, or even one hundred thousand, the average would be about the same.

In England, also, clergymen live to a greater age than any other class. According to the report of the Secretary of the Clerical Mutual Life Assurance Society, the mortality is less than that in twenty other companies by a very important percentage.

THE DISEASES CAUSED BY THE INHALATION OF THOSE KINDS OF DUST WHOSE PRESENCE IN THE PULMONARY TISSUE MAY BE DEMONSTRATED.

THE first part of Dr. Merkel's work, a translation of which was given in the numbers of this Journal for Aug. 15 and Oct. 15, related to those "Diseases which may be Induced or Rendered Worse by the Inhalation of *any kind* of Dust." The affections discussed in Part II. differ from the above diseases in that the connection between them and the inhalation of dust may be verified *ad oculos*. In the diseases which we are now to consider, it is possible, either by ocular inspection simply, or with the aid of the microscope, or by means of chemical tests, to demonstrate the corpora delicta—the particles of dust imbedded in the tissue of the lungs. While it is not pretended that all of the changes which the lungs exhibit in these diseases are directly due to the inhalation of dust, there can be no doubt that in every instance the irritation induced by the foreign bodies in the pulmonary parenchyma is the cause of its disease, and may be shown to be immediately related to the majority of the morbid anatomical changes.

The idea that particles of dust might be taken up into the lung-tissue was first broached long ago. But for many years much confusion existed as to the true nature of the pulmonary pigment, whether this was foreign to the tissue and derived from without, or an inherent organic product. In many of the earlier descriptions of "the miner's lung," as it was called, this confusion was very apparent. Pearson thought the pigment identical with real coal. Lawrence believed that it was derived from the inhalation of soot floating in the atmosphere. Henle and Virchow insisted upon its organic nature, claiming that it was a product of the blood. Robin advocated the "coal-inhalation theory."

A very important contribution to the study of this subject was made by Traube in 1860. He published the case of a charcoal-burner, whose lungs were found, *post-mortem*, filled with a black material which was evidently coal-dust. Particles of the dust had been seen in the sputa for some time before death. But in this case no coal was found in the parenchyma, only in the alveoli. Therefore the question of the "miner's lung" was not yet fully decided.

Villaret, while avowing the theory that the changes in the miner's lung are due to the intrusion of particles of dust upon the lung-tissue, contended that the deposit took place by way of the organs of digestion. He claimed that the particles were swallowed and carried from the stomach and intestines through the portal circulation to the right side of the heart, and thence to the tissue of the lungs. His position was based upon experiments in which he fed rabbits upon matters containing coal-dust, and afterwards found, particles of the coal in the mesenteric glands, in the blood of the mesenteric veins and right side of the heart, and in the liver and spleen. His conclusions, however, were not confirmed.

The intrusion of dust upon the pulmonary tissue was at length verified by Zenker, who described lungs in which he found coloring matter which was quite distinct from the ordinary pigment. Virchow, also, was soon forced to admit that besides the abnormally pigmented lung which he had described, there existed a true anthracosis pulmonum.

It having been ascertained that dust may penetrate into the lung-tissue, it remained to discover by what means it gets there. Villaret's theory met with slight favor, and was especially opposed by the case described by Traube, where the coal-dust, by means of inhalation, had gained access to the alveoli. We should naturally suppose that the ciliary movements of the epithelium would prevent the dust penetrating so far as this, and that the particles would be expectorated almost as soon as inhaled. But the catarrh which is soon induced by breathing the dusty atmosphere tends gradually to destroy this expulsive power, and the dust, once arrived in the alveoli, finds comparatively easy access to the parenchyma. For whether the air-cells possess no epithelium, or only at certain intervals, or, as claimed by Buhl, are mere air-containing lymphatic spaces, the passage of fine molecules of dust through the thin walls would meet with far less resistance than from the bronchial mucous membrane.

Rindfleisch describes the probable course taken by the particles of coal as follows:

"The sharp points and dense structure of the molecules, which would be the same in the minutest divisions of the coal as in the large pieces, renders the particles of dust especially calculated to penetrate the soft tissues of the body whenever even a slight impulse is imparted to them from any direction. The particles having once entered the parenchyma of the lung, they will follow the general course of the extravascular, nutritive fluids, and so tend towards the lymphatic system. But now and then on their way they encounter cellular elements which are capable of permently entangling solid bodies in their protoplasm.

"First of these come the stellate connective-tissue cells, next the *wandering*-cells which have an amœboid nature, and carry the black particles with them wherever they go. Whatever remains over, which the cells do not seize, is then swept on towards the root of the

lung, and thence arrives in the lymphatic vessels of the mediastinum.

"Here an insuperable obstacle is presented to their further course, since all the numberless lymphatic corpuscles, which are here accumulated, stand ready to take up as many of the black particles as their protoplasm will hold."

This theoretical description is fully endorsed by Merkel, who observes that its probability is increased from the fact that "the deepest pigmentation is found in the connective tissue surrounding the bronchi and arterioles, and, in general, corresponds to the arrangement of the lymphatic system." "Where the pigmentation is not very deep the microscope shows that the stellate connective-tissue cells take the chief part in imbibing the pigment, while the vicinity of the larger lymphatic vessels is generally occupied by a dense cloud of black granules. In the lymphatic glands the lymphatic sinus is seen to become filled first, and afterwards the parenchyma becomes so beset with them that finally every trace of its structure disappears. If the particles of coal are replaced by particles of iron, and the black by red, we have the appearance of the red iron lung; and so of the other varieties of lung, due to the inhalation of other kinds of dust."

It is obvious that the presence of foreign matter in the pulmonary tissue cannot be indifferent to its health and to the normal processes of nutrition. The degree of derangement to which it may give rise will depend mainly upon four conditions, viz.: (1.) Upon the previous health or disease of the lungs affected; (2.) Upon the susceptibility of the lungs to irritation depending upon the general power of resistance of the individual to morbid influences; (3.) Upon the amount of dust in the atmosphere inhaled, or upon the duration of the exposure to it, and (4.) Upon the quality of the dust, "whether the molecules are sharp-edged and angular, or roundish, whether they are very soft or very hard, whether chemically noxious or innocuous." Of course, those kinds of soluble dust which act as poisons to the general system are not here included.

The pulmonary disease to which the deposition of particles of dust in the lung-tissue gives rise is generally designated by the term *Pneumokoniosis*, from *ὁ πνευμων*, the lung, and *ἡ κονις*, the dust. Five different forms of the disease are described, corresponding to the different kinds of dust inhaled. The first form of the disease which Merkel describes is caused by the inhalation of coal-dust.

THE DEPOSITION OF COAL-DUST IN THE LUNGS.

Synonyms.—Black infiltration of the lungs—False melanosis—Coal-miner's lung—Melanidie—Encombrement charbonneux des poumons—Anthracosis pulmonum—Pneumokoniosis anthracotica.

This form of the disease has been the most thoroughly studied of all the pneumokonioses. It may be caused by the inhalation of coal-dust in any form, whether from mineral or wood coal, from graphite, or in the form of soot; and the denser the dust the finer the particles; the more confined and the more poorly ventilated the space in which the dusty atmosphere is inhaled, the greater will the chances be of anthracosis being developed.

Pathological Anatomy.—The appearances will vary in different lungs, depending upon their susceptibility to irritation. In the above-mentioned case of Traube's the only changes were found in the alveoli of the lungs. The latter were filled with a black fluid, which, when the lungs were cut, flowed over the hands of the operator. But the parenchyma of the lungs was unaffected, so that in this case the cause of death cannot be ascribed to the anthracosis. This case is typical of many others, where the inhalation of dust under the worst circumstances has been followed by no perceptible ill effects.

"But in by far the greatest number of cases a different state of things exists.

"We find just beneath or even in the pleura pulmonalis, black depo its, which occur mostly in spots, rarely in stripes. In certain places rather hard, black nodules occur, from the size of a pin's-head to a pea, which consist wholly of coal particles, or we find perfectly ink-black indurations, which grate under the knife. Chronic pneumonic processes occur also, terminating in caseous degenerations, but they are rare. Cavities are very seldom found, according to Seltmann, and they are mostly of small size, lie partly in inflated tissue, partly in indurated portions, and may be situated in any part of the lung. Their walls are uneven and ragged, and the contents of the cavities consist of pus merely, or they are colored gray or black, through the presence of coal granules. Possibly true tubercles may at length develop. When the dense accumulations of coal approach near to the periphery small circumscribed pleuritic effusions may take place, which may culminate in general pleurisy. In all cases, without exception, enlargement and pigmentation of the bronchial glands occur. No other observer beside Villaret, so far as we know, has ever found any coal deposits in other organs."

The secondary organic affections, such as dilatation and hypertrophy of the right side of the heart, congestion of the liver, etc., are natural consequences of the foregoing, and require no special mention.

"Bronchial catarrh is invariably present. There is never any marked pigmentation of the tracheal or bronchial mucous membrane, nor any ulceration, unless due to the cavities mentioned above."

Unless the person has been inhaling the dusty atmosphere but a short time before death, we shall be unable, by microscopic examination, to detect the particles of coal in any part of the air-passages, except they be contained in the large swollen cells of the alveoli. "They occur, however, in the alveolar and infundibular septa in abundance, and are often present in such quantity as to wholly obscure the natural structure. The connective-tissue cells are crammed full of black molecules, and the sheaths of the vessels and bronchioles swarm with them. It has been pointed out already that these passages coincide with the courses of the lymphatic vessels. The indurations and nodules consist mainly of dense fibrous tissue, in which the particles of dust appear to be imbedded, corresponding mostly to the course of the fibres, and from which they cannot be removed either by brushing or washing.

"In the chronic pneumonic spots, and also in the caseous deposits, the outlines of the alveoli are often indicated by lines of black molecules, corresponding in their situation with the interstices of the trabeculæ.

"In the lymphatic glands the deposition corresponds most exactly with the above theoretical description of Rindfleisch."

The best criterion for deciding that black granules found in a lung are coal, will be the fact of not finding such pigment forms as are evidently derived from the blood. "Small crystalline forms of a bright brown, or especially of a golden brown color in the vicinity of black masses of pigment, will render it probable that the pigment masses have originated in the lung."

With regard to the molecules of charcoal, however, it will be possible to recognize them by means of their form, their pores, etc. Chemical reagents are of but little value in determining the nature of coal granules. Moreover, the anatomical appearances remain the same whether they are due to the dust of mineral coal, or charcoal, or to graphite.

Symptoms of Anthracosis.—The *cough* has but little value as a diagnostic sign, unless it persists for a considerable time after the person has left the dusty atmosphere. At first it is directly due to the irritation of the foreign particles in the air-passages, its object being simply to expel the dust. But when it begins to remain long after the patient has ceased to inhale the dust, it is obviously due to a commencing catarrh. It is the signal that Nature's safeguards against the intrusion of foreign matters into the lungs are becoming inadequate. The ciliated epithelium is probably partially destroyed. The *sputa* contain but slight mucus at first, but gradually they become more copious, tougher, and contain a larger proportion of mucin. At length they become purulent and pass through the different variations which correspond to the pathological changes in grave pulmonary disease. Of course, the expectoration will be tinged in varying shades from gray to black, according to the amount of coal-dust in it, from the very start. The dark color is not a sign of disease, however, unless it continues for a considerable period after the patient has left his work. At first the particles of coal will be found free in the sputa, afterwards, also, enclosed in swollen cells. The patient not returning to his work, the particles which are free first gradually disappear from the expectoration, and then also those contained in cells. And so a recovery may take place, all the coal having been expectorated, or what remains being so enclosed in the tissues as to be innocuous and create no further irritation. But, on the other hand, should the expectoration of free particles of coal still persist long after they were inhaled, the prognosis will be less favorable. Under these circumstances the free particles can only come from the tissue of the lung. According to Seltmann, a copious serous effusion into the parenchyma washes the granules out of the tissue, and forces them into the alveoli again. In case the occupation is still pursued, damage to the pulmonary tissue may be inferred from the presence of elastic fibres in the sputa.

One of the most prominent of the symptoms of anthracosis is *dyspnœa*. It is, doubtless, partly due to the presence of the foreign accumulation in the lungs, clogging the air-cells and interfering with a complete interchange of gases. But in most cases the course of the dyspnœa is to be referred to the bronchial catarrh which is commonly present, and in no less measure, perhaps, to emphysema. Whether the emphysema, which is an extremely common affection of colliers, is solely dependent upon the inhalation of coal-dust, is doubtful. The excessive muscular exertions which this class of laborers are compelled to make would suffice to account for the production of emphysema independently of the dust inhaled. Finally, anæmia is very apt to exist in coal-miners, due to insufficient aeration of the blood, and this also may be one source of the dyspnœa, particularly in the earlier stages.

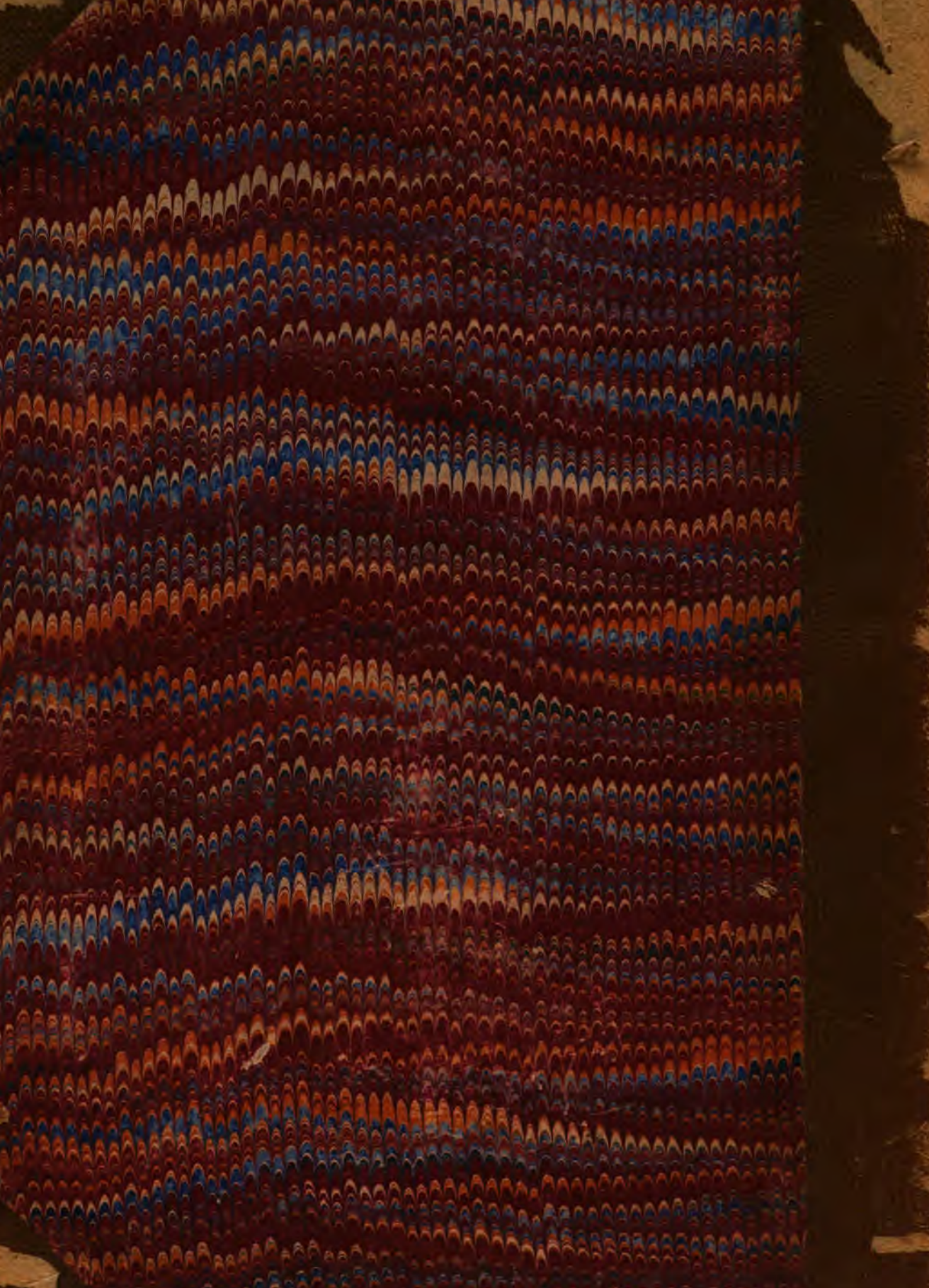
All writers on anthracosis concur in the opinion that it seldom leads to consumption. The rarity of the occurrence of phthisis in connection with this affection has given rise to the presumption that the inhalation of coal-dust has a prophylactic effect against tuberculosis or pneumonic consumption. Although workers in coal are not entirely exempt from chronic and interstitial pneumonic affections, these diseases are very rare, in comparison with the frequency of their occurrence amongst those who work in other kinds of dust. Moreover, the fact that these affections occur only in the highest grades of anthracosis, and that while most common in the English colliers they are unusual even there, favors the presumption that the coal-dust does afford a certain protection against phthisis. The dust inhaled by the English colliers contains, besides coal, large quantities of silicious earths; the miners are also excluded from the light and fresh air, besides leading very irregular lives—the very conditions under which we should expect to find grave pulmonary diseases of the most common occurrence. But though the inhalation of coal-dust of itself rarely causes degeneration of the pulmonary tissue, phthisis and anthracosis may be coincident diseases. In some cases, too, the bronchial catarrh, when of high grade and of long duration, may give rise to an extension of the inflammatory process to the adjacent lung-tissue, resulting in induration and degeneration. Again, the presence of large quantities of coal-dust imbedded in the tissue of the lungs might, in case of an accidental pneumonic process, predispose the tissue to mortification. Why the lungs of one individual should succumb earlier than those of another, is explained by the difference in the susceptibility of different individuals.

CONCERNING THE LABORERS WHOSE OCCUPATIONS OBLIGE THEM TO INHALE COAL-DUST.

All writers agree in the statement that, as a rule, workers in coal are an exceedingly healthy class. According to statistics collected by Hirt, out of 39,879 cases of various internal diseases occurring in miners, during six years, 6,553 were cases of catarrh of the respiratory organs, 1,836 cases of pneumonia, 394 emphysema, and 345 phthisis.

Another table of Hirt's shows that of 100 phthisis patients, 26 per cent. worked in inorganic dust, 17 per cent. worked in organic dust, 11 per cent. in no dust, and 1.3 per cent. in coal-dust.

A table designed to show the proportions of various chest diseases in colliers is given below:

	Phthisis.	Chronic Bron. Catarrh.	Emphysema.	Pneumonia.	
In Upper Silesia, 148,429 examined; 39,879 with internal diseases	0.8	16.4	0.9	4.7	22.8
In Horde (Arnsberg), 14,499 patients	1.1	18.3	(?)	3.6	23.0
In Breslau, 49 patients	2.0	22.4	8.1	14.4	46.9

In these tables it is remarkable that so few cases of emphysema and phthisis were noted. Most writers regard the former disease as more common than here stated. But it is to be noticed that in one instance 16.4 per cent., and in another 18.3 per cent., were cases of bronchial catarrh. It is probable that many of these cases were associated with emphysema, since the two diseases are often combined, and that only pure, uncomplicated cases were denominated as emphysema. The statement is made by Hirt, that the number of cases of emphysema in the coal miners at